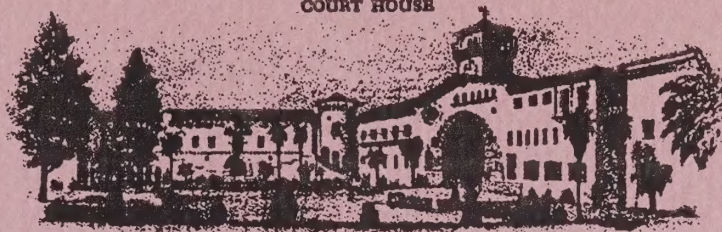


COURT HOUSE



COUNTY OF SANTA BARBARA

COUNTYWIDE HOUSEHOLD HAZARDOUS WASTE ELEMENT

for the

County of Santa Barbara Unincorporated Areas

City of Carpinteria

City of Santa Barbara

City of Solvang

City of Lompoc

City of Santa Maria

City of Guadalupe

Vandenberg Air Force Base

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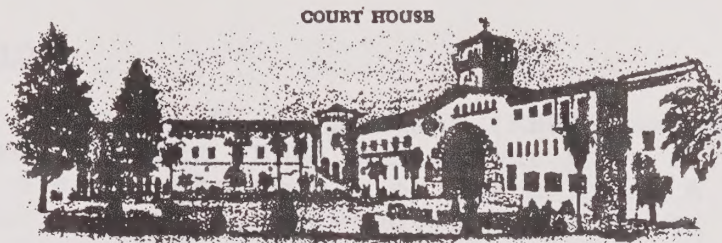
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Community Environmental Council
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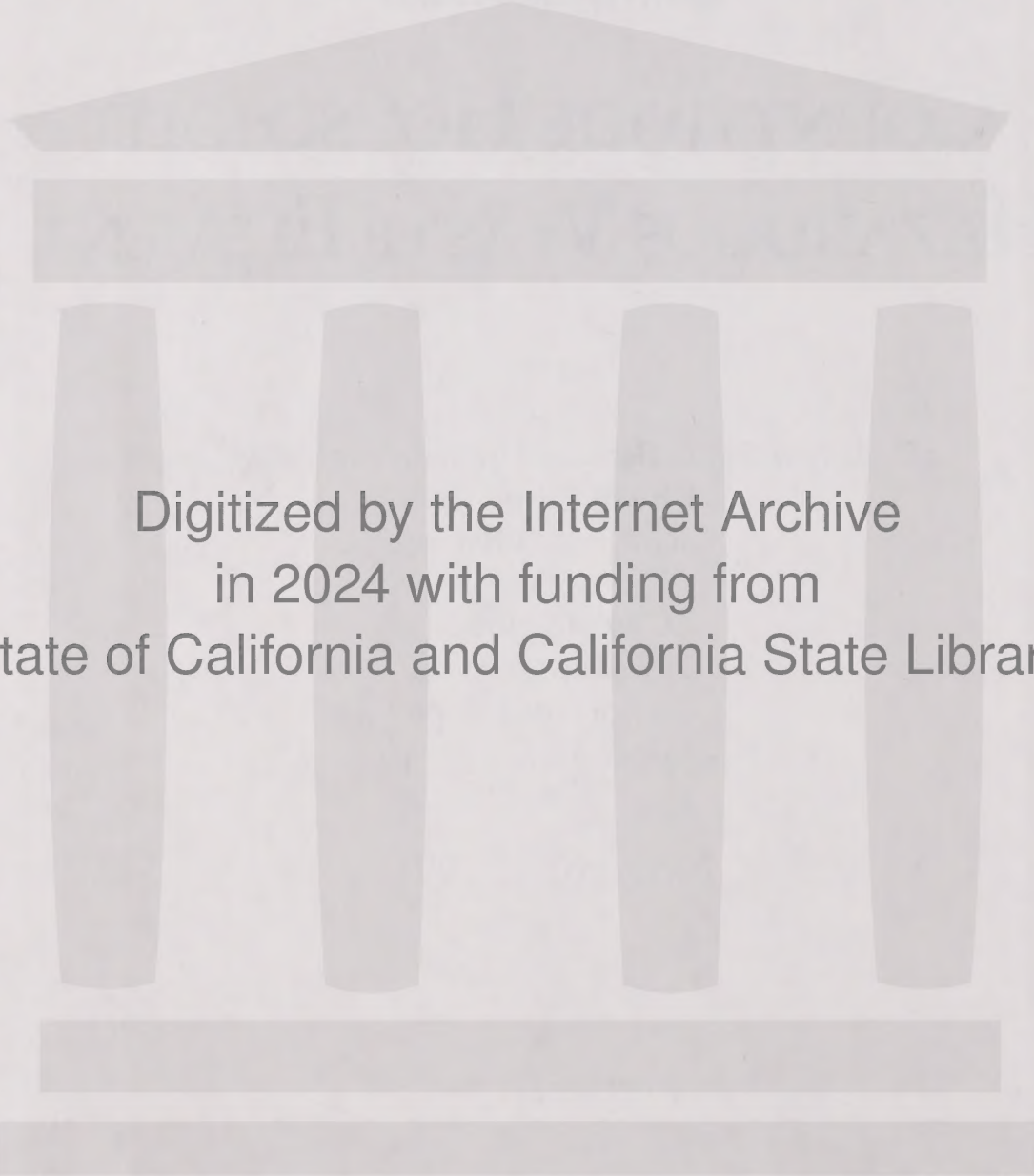
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1.0 INTRODUCTION

This Household Hazardous Waste Element (HHWE) recommends a household hazardous waste (HHW) management plan for the unincorporated area of the County of Santa Barbara, the Cities of Carpinteria, Santa Barbara, Solvang, Lompoc, Santa Maria, Guadalupe, and Vandenberg Air Force Base (AFB). This element describes the existing HHW programs, evaluates HHW management alternatives and recommends a management system for each jurisdiction including program implementation and a monitoring and evaluation system. Additionally, estimated costs for each HHW management alternative have been identified, as well as funding sources for existing and planned HHW programs.

The costs of implementing diversion programs for household hazardous wastes are extremely high, especially when compared to the cost associated with programs to divert other components of the municipal solid wastestream (e.g., non-hazardous recyclable materials). Hazardous waste management programs are expensive due to the costs of hiring properly trained personnel, designing safe, effective containment systems, and properly disposing of the collected materials at permitted hazardous waste disposal facilities. The largest portion of a HHW program's cost is disposal, which is typically between \$350 and \$1000 per 55 gallon drum. These high costs could make it prohibitively expensive to collect additional household hazardous waste after a certain point.

When discussing the cost effectiveness of HHW programs that, at best, divert less than one percent of the solid wastestream, it is important to understand that the driving issue is not preserving landfill disposal capacity; it is protecting human and environmental health. Hidden costs resulting from improper HHW disposal, such as medical expenses for injured sanitation workers and clean-up costs for groundwater and soil contamination must also be taken into consideration when evaluating an HHW program's cost effectiveness. In light of these considerations, it is clear that these programs are crucial despite their high costs. However, the long-term solution for household hazardous waste must focus on source reduction by consumers and manufacturers of hazardous household products. Removing these materials from the wastestream entirely is the only *really* cost effective long-term solution for household hazardous waste management.

The primary goal of this HHWE is to reduce the amount of HHW currently entering the municipal solid waste landfills and to ensure that all residents have convenient and safe HHW disposal options available to them.

1.1 HHWE Summary

All cities and unincorporated areas within the County of Santa Barbara are represented in this HHWE. The existing household hazardous waste management programs currently offered throughout

the County, programs planned in the short and medium-term planning period, and funding for current and future programs are based on wasted areas rather than by incorporated and unincorporated area jurisdictions. Because of this wasted structure, it is necessary for the County and cities to take a regional approach to household hazardous waste management.

The following is a summary breakdown of HHW management programs to be implemented in each jurisdiction (cities and unincorporated areas within the County of Santa Barbara). The summary indicates which selected HHW alternatives will be implemented for each jurisdiction in the short and medium-term planning periods and whether a jurisdiction will be utilizing a HHW program(s) in a neighboring community.

1.1.1 Short-term Planning Period (1991-1995)

City of Carpinteria:

- * Continue the County sponsored curbside waste oil collection program;
- * Site a waste oil collection facility;
- * Utilize the South County periodic HHW collection events until the permanent fixed HHW collection facility is operational;
- * Utilize the County's planned South County permanent fixed HHW collection facility when operational; and
- * Utilize the County's planned expansion of HHW education and public information.

City of Santa Barbara:

- * Continue the County sponsored curbside waste oil collection program;
- * Site a waste oil collection facility;
- * Utilize the South County periodic HHW collection events until the permanent fixed HHW collection facility is operational;
- * Utilize the County's planned South County permanent fixed HHW collection facility when operational; and

- * Utilize the County's planned expansion of HHW education and public information.

City of Solvang:

- * Continue the County sponsored curbside waste oil collection program;
- * Participate in the annual County sponsored periodic HHW collection events held in the Santa Ynez Valley;
- * Utilize the County's planned recyclable household hazardous materials (RHHM) collection facility planned for Foxen Canyon Landfill, and
- * Utilize the County's planned expansion of HHW education and public information.

City of Lompoc:

- * Continue the City sponsored curbside waste oil collection program;
- * Continue the City sponsored waste oil collection service at the Lompoc Landfill;
- * Continue load checking program at Lompoc Landfill and upgrade storage area for diverted HHW materials;
- * Continue periodic annual HHW collection events until the permanent fixed HHW collection facility is operational;
- * Site a permanent fixed HHW collection facility; and
- * Utilize the County's planned expansion of HHW education and public information.

City of Santa Maria:

- * Continue the City sponsored curbside waste oil collection program;
- * Continue load checking program at the Santa Maria Landfill and upgrade storage area for diverted HHW materials;
- * Site a permanent fixed HHW collection facility; and

- * Utilize the County's planned expansion of HHW education and public information.

City of Guadalupe:

- * Site a waste oil collection facility;
- * Utilize the planned permanent fixed HHW collection facility in Santa Maria; and
- * Utilize the County's planned expansion of HHW education and public information.

Vandenberg Air Force Base:

- * Continue operation of the permanent fixed HHW collection facility;
- * Continue the load checking program at the Vandenberg AFB Landfill;
- * Continue the RHHM collection program at various base facilities; and
- * Utilize the County's planned expansion of HHW education and public information.

Unincorporated South County:

- * Continue the County sponsored curbside waste oil collection program;
- * Utilize planned waste oil collection facilities in the cities of Santa Barbara and Carpinteria;
- * Continue the South County periodic HHW collection events until the permanent fixed HHW collection facility is operational;
- * Site a South County permanent fixed HHW collection facility;
- * Continue load checking programs at the Tajiguas Landfill and South County transfer station and upgrade storage areas for diverted HHW materials; and
- * Expand the HHW education and public information for use Countywide.

Unincorporated North County:

- * Continue the County sponsored curbside waste oil collection program in Santa Ynez Valley and Orcutt;
- * Utilize the waste oil collection facility at the Lompoc Landfill;
- * Utilize the periodic HHW collection events in Lompoc until the permanent fixed HHW collection facility is operational in that watershed;
- * Continue the annual County sponsored periodic HHW collection events held in the Santa Ynez Valley;
- * Utilize the permanent fixed HHW collection facilities planned for the City of Santa Maria and City of Lompoc;
- * Site a recyclable household hazardous materials (RHHM) collection facility at Foxen Canyon Landfill;
- * Continue load checking program at the Foxen Canyon Landfill and upgrade storage area for diverted HHW materials; and
- * Expand the HHW education and public information for use Countywide.

1.1.2 Medium-term Planning Period (1996-2000)

All household hazardous waste alternatives planned for the Cities of Carpinteria, Santa Barbara, Solvang, Lompoc, Santa Maria and Guadalupe, Vandenberg AFB and the unincorporated areas of the County of Santa Barbara will be implemented within the short-term planning period. For the purposes of this summary, continuation of HHW programs and monitoring and evaluation of these programs is planned for the medium-term time frame in all jurisdictions. The medium-term planning period and monitoring and evaluation is discussed in more detail in this HHWE.

2.0 HOUSEHOLD HAZARDOUS WASTE ELEMENT OBJECTIVES

The County of Santa Barbara Hazardous Waste Management Plan (HWMP), completed in November 1988, established policies to manage household hazardous waste in the County. The objectives developed for this HHWE were based on review of the HWMP and

recent feasibility studies completed for North and South County permanent HHW collection facilities. In addition, regional approaches for the HHWE objectives were developed through discussions with County and other local jurisdictions' waste management officials. The objectives recommended for this element are consistent with existing County policies. The HHWE objectives are:

Short-Term Planning Period (1991-1995):

1. To continue the existing periodic HHW collection program until permanent HHW collection facilities are operational;
2. To continue and expand recycling programs for motor oil, latex paint, antifreeze, and car batteries; and
3. To continue and expand the HHW public education and information programs. The program shall continue to emphasize the dangers and environmental risks associated with improper disposal of HHW and provide information on non-toxic alternatives with an emphasis on source reduction. The program shall be expanded to reach a greater percentage of the population and to include Spanish translations for all educational and promotional materials.

Medium-Term Planning Period (1996-2000):

1. Ongoing implementation of alternatives implemented in the short term;
2. To the extent possible, significantly reduce or eliminate the disposal of HHW at all solid waste facilities;
3. To the extent possible, significantly reduce or eliminate the disposal of HHW into local sewer systems, creeks, rivers and other watersheds, or onto the ground or roadways.

2.1 Priority Waste Types

The following waste types have been identified as priority wastes due to their hazardous constituents and the volumes generated within the County by the private sector. A hazardous material is characterized by the Environmental Protection Agency (EPA) and the California Department of Health Services (DHS) as being

corrosive, flammable, reactive or poisonous. All of these waste types will be targeted in the short term (1991-1995) with monitoring and program improvements and/or expansions targeted in the medium term (1996-2000):

Motor Oil makes up 31 percent of the HHW stream based on data from the existing HHW collection program. Motor oil is toxic to human health and small amounts of oil can cause major environmental damage, especially to fresh water systems. Used motor oil is relatively easy to collect and recycling markets exist throughout the State.

Oil-Based Paint is the second largest HHW stream at 27 percent. Oil-based paints are flammable and pose a risk to human health and the environment (to air quality in particular). As oil based paint products are phased out of production there should be a reduction of this wastestream over time. However, historical accumulations should keep it as a high priority throughout the medium term.

Latex Paint makes up 15 percent of the HHW stream. Although latex paint does not contain the solvents found in oil-based products, toxic constituents are still found in many of the latex paint pigments and preservatives. This makes latex paint a possible risk to human health and the environment. Currently markets for recycled latex paint are being developed statewide.

Other Household Hazardous Wastes account for the remaining 27 percent of the HHW stream. This includes chemical cleaners, pesticides, fertilizers, solvents, automobile fluids, pool chemicals, hobby supplies, glues and varnishes, waxes, aerosol cans and batteries. The risks to human health from these products vary and all pose a risk to the environment. Many of these products are flammable, corrosive or poisonous and disposal is expensive. Non-toxic alternatives are available for many of these products.

3.0 EXISTING CONDITIONS

In 1986 the Hazardous Waste Management Planning Law (AB 2948 Tanner) was passed requiring all counties in California to develop a hazardous waste management plan. Hazardous waste generated by households was to be included in the management plan. In November 1988 the County of Santa Barbara HWMP was completed and program implementation has begun. Specific goals

and policies related to the management of HHW were established countywide. These goals and policies are:

- | | |
|----------------|--|
| Goal No. 6-1 | To promote waste minimization, recycling and safe management of household hazardous waste. |
| Policy No. 6-1 | The County and the cities should continue programs for the proper collection and disposition of household hazardous waste. Programs should include collection days, permanent collection and transfer facilities, and curbside pick-up, as appropriate and feasible. |
| Policy No. 6-2 | The County and cities should expand the public education program on the safe use and minimization of household hazardous products. |
| Policy No. 6-3 | The County and cities should evaluate and implement additional programs in order to maximize recycling of household hazardous waste. |

3.1 Existing Funding Sources for HHW Collection Programs

Since 1984 the County has acted as the lead agency in sponsoring and implementing the HHW collection program throughout the County. The County contracts with the Community Environmental Council, Inc. (CEC) of Santa Barbara to coordinate this program. Originally, the County of Santa Barbara assumed full responsibility for funding and coordination of the HHW collection programs, funding these programs through the Solid Waste Enterprise Fund. Participating cities are now sharing these program funding responsibilities. Formal agreements for this shared responsibility between the County and the participating cities have not yet been developed.

The County, which operates the Foxen Canyon Landfill in the Santa Ynez Valley and the Tajiguas Landfill in the South County, has assumed responsibility for funding and coordinating the HHW collection program for residents in both the incorporated cities and unincorporated areas which are served by these landfills. The City of Lompoc funds and coordinates a collection program for city residents and surrounding unincorporated area residents with revenues from the operation of their solid waste landfill. The

City of Santa Maria operates the solid waste landfill that serves not only city residents, but the City of Guadalupe and unincorporated County residents in the Santa Maria Valley. The City is in the process of increasing their solid waste tip fee to fund future HHW collection activities.

3.2 Periodic Collection Events

Currently four HHW collection days are offered annually throughout the County. The HHW collection days are offered free of charge to area residents. Each participant is allowed to make three trips to the collection site and may bring up to five gallons of liquid or fifty pounds of solid hazardous waste per trip. Materials accepted include recyclables such as motor oil, latex paint, anti-freeze and car batteries and other hazardous wastes such as chemical cleaners, solvents, oil-based paint products, pesticides and other typical household and garden chemical products.

A hazardous waste contractor is hired to remove wastes from vehicles, segregate, bulk and package wastes, and transport wastes and recyclable materials off the site to an appropriate hazardous waste Treatment, Storage and Disposal Facility (TSDF). Additional staff is provided by local agencies from both the County and host cities. Community volunteers are also utilized. The event is open to the public for a five hour period.

Small businesses producing less than 100 kilograms of hazardous waste per month are allowed to participate in the County's HHW collection program. These generators are defined by the Environmental Protection Agency (EPA) as Conditionally Exempt Generators and by DHS as Noncommercial Generators. For this HHWE, which only addresses households, the portion of the waste collected from these generators will not be included.

Unincorporated County residents are serviced by regional periodic HHW collection events. County residents in the South County utilize the two annual HHW collection events held in Santa Barbara. Residents in the Santa Ynez Valley may participate in the annual Santa Ynez HHW collection event and unincorporated residents within the Lompoc watershed may participate in the annual Lompoc sponsored event. Residents in the unincorporated areas within the Santa Maria watershed currently do not have an ongoing HHW collection program as that city has not yet secured funding for this program. However, those residents may participate in any of the County sponsored events.

Carpinteria City residents are serviced by two annual HHW collection days held in the spring and fall in the South County. The events are held at Earl Warren Showgrounds in Santa Barbara, approximately 15 miles from Carpinteria. These two collection events also service all of the unincorporated areas in the South County from Gaviota to the Ventura border. Carpinteria residents make up approximately 10 percent of the collection day participants. Carpinteria and the other South County area residents are customers of the Tajiguas Landfill. These HHW events are funded by the County of Santa Barbara Solid Waste Enterprise Fund.

Santa Barbara City residents are serviced by two annual HHW collection days held in the spring and fall in the South County. The events are held at Earl Warren Showgrounds, a centrally located and easily identifiable facility. These two collection events also service all of the unincorporated areas in the South County from Gaviota to the Ventura border. Santa Barbara City residents make up approximately 45 percent of the collection day participants. Santa Barbara City and the other South County area residents are customers of the Tajiguas Landfill. These HHW events are funded by the County of Santa Barbara Solid Waste Enterprise Fund.

Solvang City residents are serviced by an annual HHW collection day offered each spring in the Santa Ynez Valley. The event is held at a county road yard facility, approximately 12 miles east of Solvang. Unincorporated area residents throughout the Santa Ynez Valley and other outlying North County areas are also serviced by this event. Solvang City residents make up approximately 28 percent of the collection day participants. This HHW event is funded from the Foxen Canyon Landfill tipping fees.

Lompoc City residents are serviced by an annual HHW collection day offered each year in late spring. The event is held at a city owned/operated corporate yard facility. Unincorporated areas surrounding Lompoc also utilize this event as they are customers of the Lompoc Landfill. This HHW event is funded by the Lompoc Landfill tipping fees.

Santa Maria City residents currently do not have an existing periodic HHW collection event program. The city is in the process of increasing solid waste landfill tipping fees to cover the cost of a HHW collection program. In June 1990 an event was held in the North County community of Orcutt, just south of Santa Maria. This event was funded by the County for unincorporated North County residents, although 1 percent of event participants

were Santa Maria residents (approximately 30). The Orcutt collection event will not be offered again.

Guadalupe City residents currently have no existing periodic HHW collection event program. All solid waste generated in Guadalupe is disposed of in the Santa Maria Landfill. The City of Santa Maria, which operates the landfill, is in the process of increasing solid waste landfill tipping fees to cover the cost of a HHW program for residents of the Santa Maria Valley. When this program is in place, it would be open to residents of the City of Guadalupe.

Vandenberg AFB, until recently, operated quarterly HHW collection events for base residents. Approximately 15 percent of the 4,000 households participated annually in this HHW collection program. Beginning in the first quarter of 1991, a permanent fixed HHW collection facility was opened to replace the quarterly events. The hours of the facility are Tuesday through Friday from 8:00 a.m. to 4:00 p.m. Funding for the HHW programs comes from the United States Department of Defense. Vandenberg AFB operates their own solid waste landfill within their jurisdiction. There are no landfill fees to draw from for the operation of the HHW collection program as residents do not pay for trash disposal on the base.

Table 3.2(a) and Table 3.2(b) summarize the five HHW collection events held throughout the County for fiscal year 1990 (July 1989 to June 1990) and two of the four quarterly HHW collection events held at Vandenberg AFB in calendar year 1990.

3.3 Waste Oil Collection

Waste oil has recently been added to existing curbside recycling programs throughout the County. Additionally, several cities within the County accept waste oil at their landfills to either supplement their curbside program or serve as an alternative to curbside collection. In the South County, a pilot waste oil drop-off location is also being developed with assistance from the Community Environmental Council, the County and the City of Carpinteria. This pilot facility would be operational in late 1991.

Unincorporated County residents may dispose of motor oil through a variety of curbside programs offered by the County. In the South County there are 10,500 homes in unincorporated areas on a curbside recycling program. For those homes not included in the curbside program a weekend drop-off location has been established at Montecito Union School. The Community Environmental Council

TABLE 3.2 (a) SANTA BARBARA COUNTY HHW COLLECTION EVENTS Summary for Fiscal Year 1989/90					
	Santa Barbara November 1989	Santa Barbara April 1990	Santa Ynez May 1990	Lompoc June 1990	Orcutt June 1990
Participating Households	1110	1400	236	720	310
Materials Recycled					
Motor oil (gallons)	3150	2000	700	2600	600
Latex Paint (gallons)	900	1635	250	605	300
Anti-Freeze (gallons)	75	125	30	85	50
Car Batteries (number)	48	102	34	80	27
HHW Treated/Disposed					
Flammables (gallons) solvents, paints	2180	3940	550	2000	550
Other HHW (gallons) pesticides, cleaners	2740	3600	740	1135	740
Source: Community Environmental Council, Inc.					
Note: Because small businesses participated in these five events, the figures have been adjusted to reflect just the HHW as this element does not address hazardous waste generated by businesses.					

TABLE 3.2 (b)
VANDENBERG AFB QUARTERLY HHW COLLECTION EVENTS
 Summary for Two of Four Events in Calendar Year 1990

	May 1990	September 1990
Participating Households (average per event)	75	75
Materials Collected		
Motor Oil	50 gallons	73 gallons
Pesticides	50 pounds	5 pounds
Paint (latex and oil-based)	28 gallons	24 gallons
Ethylene Glycol	8 gallons	15 gallons
1,1,1 Trichloroethane	5 gallons	--
Concrete Sealer	5 gallons	--
Transmission Fluid	2 gallons	4 gallons
Aerosol Cans	60 each	82 each
Empty Paint Containers	50 each	50 each
Used Oil Filters	5 each	14 each
Car Batteries	4 each	8 each

Source: Vandenberg AFB, Environmental Management Office

is currently working together with the County and the City of Carpinteria to site a pilot waste oil collection facility at an appropriate site (yet to be selected) in Carpinteria. This facility would be operational in late 1991. Unincorporated South County residents may also recycle motor oil at the periodic HHW collection events offered twice a year in Santa Barbara.

In the North County a 2,900 home curbside recycling program is offered for residents in the unincorporated areas near Lompoc. Lompoc Landfill customers may also drop off waste oil directly at the landfill through the City's oil recycling program. A regional recycler, Valley Recycling, picks up waste oil on a 9,000 home curbside recycling program in Orcutt and from a 1,500 home program in the unincorporated areas of Santa Ynez Valley. Additionally, unincorporated North County residents may recycle motor oil at either of the annual periodic HHW collection events offered in Santa Ynez and Lompoc.

Carpinteria City residents may dispose of waste oil through the County sponsored curbside recycling program. The curbside program is offered to 2,600 homes in the city. Those residents not on the recycling program may drop off motor oil at the neighborhood weekend drop-off location at Montecito Union School. The Community Environmental Council is currently working together with the County and the City of Carpinteria to site a pilot waste oil collection facility at an appropriate site (yet to be selected) in the City of Carpinteria. This facility would be operational in late 1991. City residents may also recycle motor oil at the two periodic HHW collection events offered each year in Santa Barbara.

Santa Barbara City residents may dispose of waste oil through the County sponsored curbside recycling program. The curbside program is offered to 13,250 homes in the city. Those residents not on the recycling program may drop off motor oil at the neighborhood weekend drop-off location at Montecito Union School. City residents may also recycle motor oil at the two HHW collection events offered each year in Santa Barbara.

Solvang City residents may dispose of waste oil through a County sponsored curbside recycling program. The curbside program is offered to all city residents, approximately 2,600 homes. Residents may also utilize the periodic HHW collection event offered each spring in the Santa Ynez Valley.

Lompoc City residents may dispose of waste oil at the Lompoc Landfill during normal operating hours. A new waste oil collection program began in 1991 in which residents are provided

with a waste oil recycling kit that includes a collection bag and filter. The oil may then be dropped-off at the City Corporate Yard. The kits are available upon request, free of charge.

Santa Maria City residents may drop waste oil off at the Santa Maria Landfill during normal operating hours.

Guadalupe City residents currently do not have a waste oil collection program other than what is offered as part of the load checking/diversion program at the Santa Maria landfill. This program simply removes the motor oil found in the trash and does not address proper disposal by residents.

Vandenberg Air Force Base has always allowed residents to drop off their used motor oil at any of the auto or hobby shops located on base. Residents may also recycle motor oil through the existing permanent HHW collection facility which is open four days a week.

3.4 Public Education

The key to a successful HHW collection program is to educate the general public on how to identify hazardous materials commonly found in the home and garage and the potential health, safety and environmental problems that result from improper HHW disposal practices. This information is used to help promote the County's and cities' periodic HHW periodic collection events in press releases, news articles, public service announcements and advertising in local newspapers, radio and television. Additional promotional materials for the periodic HHW collection events include flyers, posters, banners and inserts in utility bills. Other public education materials include the following.

Brochure

A brochure describing some of the hazards associated with improper disposal of HHW, source reduction methods and non-toxic alternatives to chemical products is offered to all HHW collection day participants. The brochure is also distributed to the public at environmental fairs and other appropriate local events, community presentations on HHW, and on request through the Community Environmental Council's HHW telephone hotline. Local information and emergency telephone numbers are also listed. The brochure is offered free of charge and is paid for through the publicity budgets for each of the periodic HHW collection days.

Presentations

As part of all the periodic HHW collection event budgets, presentations on HHW are offered to schools, service clubs and community groups. The presentations include the use of a multi-media slide show presentation, produced by the CEC for the County, videos purchased from other sources (e.g., League of Women Voters), props, demonstrations and lectures. The presentations focus on identifying HHW in the home, the problems with improper disposal and long-term storage in the home, proper disposal and recycling options, source reduction methods and recommendations for non-toxic alternatives.

HHW Hotline

The CEC (coordinator of the HHW collection program) has added a HHW information line on its automated telephone information system. The hotline provides information on all periodic HHW collection days throughout the County and allows those with additional questions about HHW to leave a message. Referrals from the solid waste haulers, the County's solid waste transfer station and local hazardous waste enforcement agencies utilize this hotline. Another line has also been added to address curbside waste oil questions for South County curbside participants.

3.5 Load Checking Programs

All solid waste landfills and the transfer station within the County, including individual city owned and operated facilities, conduct load checking programs to prevent hazardous waste from being mixed and buried with normal solid waste. Loads are routinely checked by the site crew as part of their regular duties and a spotter is assigned to check for hazardous materials as customers are unloading their waste. If a hazardous material is spotted while unloading, the generator is required to take back the material for proper disposal in a HHW collection program. If hazardous materials are discovered after customers have left the site or in commingled loads, the materials are stored in a special area until the wastes can be disposed of or recycled through either a HHW program or by a contracted hazardous waste hauler.

3.6 HHW Generation Study

The *County of Santa Barbara Waste Generation Study*, completed by R.W. Beck and Associates in February 1991, indicates that 1.4 percent of the total wastestream is hazardous waste and

approximately two-thirds of that is from residential sources (HHW). This indicates that only .86 percent (less than one percent) of the total wastestream contains household hazardous waste.

Table 4.1 summarizes the Waste Generation Study, indicating total tons of residential waste, percentage hazardous, and total tons of residential HHW by jurisdiction.

Form CIWMB-303 (Table 3.6) summarizes the household hazardous waste types and quantities diverted from disposal in programs implemented in the County of Santa Barbara (including all incorporated cities).

4.0 HHW PROGRAM ALTERNATIVES

This section outlines the alternative HHW management methods which were considered for implementation. These alternatives are evaluated in Section 6.0, Evaluation of HHW Alternatives, of this element.

4.1 Public Education on Reducing and Properly Disposing of HHW

This alternative would expand existing HHW public information and education. The education and public information programs would target all residents within the County, and emphasize preventative measures such as source reduction, recycling, and proper disposal of HHW.

4.2 Load Checking Program

This alternative would expand the existing system of monitoring solid waste loads entering all county and city operated disposal and transfer facilities. Staff would be trained to conduct full-time monitoring and load checking at each facility. Loads containing HHW will be diverted from solid waste disposal for proper management and enforcement measures as appropriate. Another form of load checking can occur as trash collection workers pick up trash at individual households. Trash cans containing HHW would not be collected and tagged to inform the resident of proper management methods.

ESTIMATED CURRENT DIVERSION

HOUSEHOLD HAZARDOUS WASTE COLLECTION INFORMATION

CIWMB-303 (1/90)

Name of Local Agency:	Santa Barbara	Phone:	(805) 568-3000
123 E. Anapamu	Santa Barbara	CA	93101
Address:	City:	County:	State:
			Zip:

(Please Use Applicable Units of Measurement)

Waste Category	Gallons	Pounds	Number of Containers	Number of Drums (55 gal)	Management Method
A. Flammable					
1. Used Oil	<u>11,450</u>	_____	_____	_____	<u>Recycled</u>
2. Paints					
a. Latex	<u>4,510</u>	_____	_____	_____	<u>Recycled</u>
b. Oil Base	<u>(see below)</u>	_____	_____	_____	<u>Incinerated</u>
3. Solvents, thinners, and stains	<u>(see below)</u>	_____	_____	_____	<u>Incinerated</u>
4. Gasoline and oil (mixed)	_____	_____	_____	_____	_____
5. Aerosols (excluding pesticides/herbicides)	_____	_____	_____	2 (bulked)	Propellant removed & paint recycled
6. * Other	_____	_____	_____	<u>302</u>	<u>Incinerated</u>
FLAMMABLE SUBTOTAL	<u>15,960</u>	_____	_____	<u>302</u>	_____

* Includes oil based paint, related material and solvents that are bulked. Also includes chlorinated solvents

Management Methods					
Ru Re-used	Tr	Transfer Station	T-3	Stabilization	
Rc Recycled	T-1	Incinerator	D	Land Disposal	
Bf Blended Fuel	T-2	Aqueous Treatment	Other		

Waste Category	Gallons	Pounds	Number of Containers	Number of Drums (55 gal)	Management Method
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B. Pesticides

Such as
herbicides,
insecticides,
fungicides, etc.

PESTICIDE
SUBTOTAL

155

Landfill

155

C. Corrosives

1. Acids

a. Oxidizing

12

Landfill

b. Non-
Oxidizing

26

Landfill

2. Alkaline

37

Landfill

CORROSIVES
SUBTOTAL

75

D. Oxidizers

Excluding acids

13

Landfill

OXIDIZERS
SUBTOTAL

13

E. Miscellaneous

1. Car Batteries

379

Recycle

2. Dry Cells

3. Mercury

4. Other

112.5

Landfill

MISC
SUBTOTAL

15,960

379

112.5

* Includes antifreeze, asbestos, PCB's, solidified solids, NonRcra Waste

TOTAL WASTE
COLLECTED

15,960

887.5

Table 4.1: Household Hazardous Waste in the County of Santa Barbara Wastestream.

Jurisdiction	Total Residential Waste (tpy)	Percent Hazardous	Total HHW (tpy)
Unincorporated	139,485	0.6%	1,507
Carpinteria	18,300	*	--
Santa Barbara	51,240	2.3%	1,971
Solvang	3,483	0.5%	37
Lompoc	24,933	0.6%	337
Santa Maria	36,086	0.2%	271
Guadalupe	3,203	0.3%	22
Vandenberg AFB	11,500	0.8%	130

Source: County of Santa Barbara Waste Generation Study,
February 1991, R. W. Beck and Associates.

*Indicates no measurable amount found in sampling for this study.

4.3 Household Hazardous Materials Recycling

In this alternative, public facilities would be established for collecting recyclable HHW, such as used motor oil, latex paint, anti-freeze and automotive batteries for recycling. These facilities could be placed at County or city operated transfer stations and landfills. These recycling activities could also be part of the operations of a permanent fixed HHW collection facility. For cities that do not operate landfills, a facility could be set up at city service or public works yards.

4.4 Curbside HHW Collection Program

This alternative would provide publicly or privately operated door-to-door or curbside collection of HHW. Similar to curbside recycling collection, single-family households within the County would receive regular HHW collection service of specified types and quantities of HHW materials. This alternative also includes the collection of waste motor oil on curbside recycling routes.

4.5 Mobile HHW Collection

This alternative would provide a mobile HHW collection service throughout the County. The service would be provided to different areas in the County on a rotating basis.

4.6 Periodic HHW Collection Events

In this alternative, periodic HHW collection events in various locations throughout the County would continue. These one-day collection events are scheduled either annually or bi-annually in each location for area residents. A contracted HHW collection and transportation firm handles the waste collected at these events.

4.7 Permanent Fixed HHW Collection Facilities

In this alternative, permanent fixed HHW collection facilities would be established at public facilities. The facilities would be open on a regular basis and be accessible to all residents within the wasteshed jurisdiction of each permanent facility.

5.0 EVALUATION CRITERIA

The following criteria and evaluative discussions, as required in this HHWE, will be used to evaluate each of the HHW management alternatives described above. The interpretation of each criteria, and identification of the evaluative discussions which will be used in this HHWE are listed.

5.1 Criteria

Effectiveness: The effectiveness of the alternative to divert HHW from improper disposal.

Hazards Created: The environmental or human health and safety impacts of the alternative.

Ability to Accommodate Change: The ability of the alternative to hold up against and accommodate changes in economic, technological and social conditions, such as having a flexible technology that can adapt to changing hazardous waste disposal laws.

Consequences on Wastestream: The potential of the alternative to result in negative consequences on the wastestream such as transferring waste from one wastestream to another or creating a new wastestream.

Time Frame for Implementation: Consideration of how long an alternative will take to implement, factoring in the short- and medium-term goals of this element.

Facility Needs: The need for new facilities or facility

expansion to implementation the alternative. For example, an alternative that could make use of existing equipment and systems would have fewer facility needs.

5.2 Discussions

Consistency with Local Policies, Plans and Ordinances: Any conflicts with the local policies, plans and ordinances with the alternative will be discussed.

Institutional Barriers: The existence of institutional barriers which may conflict with an alternative, such as the permitting process.

Public Acceptance: Public approval of the alternative, such as siting facilities for HHW collection.

Impacts on Local Job Markets: Jobs created or displaced due to the implementation of the alternative.

Compatibility with the Existing Hazardous Waste Management Plan: Compatibility of the alternative with the existing waste management infrastructure.

Implementation Costs: The cost to implement the alternative.

Market Availability: The availability of markets for materials recovered, such as securing markets or end-users for recycled paint and motor oil.

6.0 EVALUATION OF HHW ALTERNATIVES

6.1 Effectiveness

Public Education: Education is vital to the success of any household hazardous waste management program and should be incorporated into all components. Educating the public about the potential health and environmental problems that result from improper disposal of HHW, as well as providing information on proper disposal practices, is a very effective method in motivating people to participate in HHW reduction or collection programs. Another key component of an HHW public education program should be to encourage the use of less toxic alternatives.

Load Checking: Load monitoring programs at all solid waste transfer and disposal facilities is an effective means of removing HHW from the solid wastestream prior to its entering the

landfill. However, it is difficult to catch all HHW once it has already become a part of the wastestream. An even more effective method of load checking can take place when trash collection workers encounter HHW in individual trash cans along their routes. Tags can be placed on the can indicating why the contents are unacceptable and including information on how the HHW can be properly disposed. In addition, public education must be included in any load checking program to ensure effectiveness.

Curbside HHW Collection: Curbside collection would certainly be the easiest way for residents to dispose of HHW as very little time or effort is required, in contrast to a mobile, periodic or permanent HHW collection facility where the participant would have to drive the materials to a designated location. However, without intensive direct mail promotion and education, these programs can fail as was the case with the City of Los Angeles' pilot door-to-door HHW collection program in 1988-89.

Recyclable Household Hazardous Materials (RHHM): Programs targeting the collection of RHHM can effectively reduce the volume of HHW. Facilities for collecting these materials can be located in communities without either periodic events or permanent HHW collection facilities. In the County of Santa Barbara, 31 percent of the HHW stream is motor oil, 15 percent is latex paint and 1 percent is antifreeze.

Mobile HHW Collection: The effectiveness of a mobile collection program depends largely upon the size of the community, the distance to collection points, the frequency of collection and a well publicized schedule. With the relatively small size of individual communities in the County, it appears that a mobile collection program would be as effective as periodic events, although not as effective as permanent facilities.

Periodic Collection: One-day events can be very effective in helping to educate the public about the problems associated with HHW. However, they are extremely expensive and energy intensive to conduct. Also, because they are only offered periodically, they cannot provide a regular and convenient method of disposal and can only serve a small percentage of the population at any one time.

Permanent Fixed HHW Collection Facilities: Permanent facilities provide a convenient, long-term disposal option. In conjunction with a good public education program, it is the most effective means of diverting HHW from a solid waste landfill. The facility must be conveniently located in order to ensure public use. Because of the size of the County and the distance between

separate communities, a minimum of three permanent facilities will be necessary.

6.2 Hazard Created

The hazards created by all alternatives considered in this plan are assumed to be less than those hazards associated with continuation of existing HHW storage and disposal practices.

Public Education: There are no physical hazards associated with this alternative.

Load Checking: Potential hazards could arise during the separation of HHW from the regular wastestream, during temporary storage, and when the HHW is transported from the landfill or transfer station to an appropriate hazardous waste facility. Using properly designed containment areas and trained personnel could minimize these risks.

Curbside HHW: Potential hazards could result when HHW is placed out on the curb prior to collection from such things as children or pets getting into the HHW, spillage, and mixing of incompatible materials.

Recyclable Household Hazardous Materials: The potential hazards associated with this alternative are not as great as other central collection points because of the less hazardous nature of the materials being collected. See following discussion for other potential hazards.

Mobile HHW Collection, Periodic Collection and Permanent Fixed HHW Collection Facilities: Central collection points require the public to transport HHW on public streets. This hazard can be reduced through educating the public about proper transportation of HHW. State law states that individuals may transport no more than 5 gallons or 50 pounds of HHW at any one time. Potential hazards could also arise during the transportation, collection and temporary storage of the HHW. Using properly designed containment facilities, trained personnel and emergency response procedures would minimize these risks.

6.3 Ability to Accommodate Changing Economic, Technological and Social Conditions

Public Education, Load Checking, Curbside HHW, Recyclable Household Hazardous Materials, Mobile HHW Collection, Periodic Collection: All of these alternatives are flexible and capable

of accommodating changing economic, technological and social conditions. They can all be expanded, reduced in size or abandoned in order to meet changes in conditions.

Permanent Fixed HHW Collection Facilities: A fixed facility can be less flexible than the other alternatives. The ability to accommodate changes such as increases or decreases in use, collecting different types and quantities of waste and using different waste management methodologies should be considered in selecting the design for the permanent facility.

6.4 Consequences on the Wastestream

All HHW programs have the potential to assist in reducing the quantities of HHW entering the solid wastestream and waste water treatment facilities.

Public Education: Effective public education encourages the public to dispose of their HHW properly as well as to purchase less toxic alternatives.

Load Checking: If conducted consistently, load checking programs can help to reduce the amount of HHW in the solid wastestream. However, since load checking programs are random, there is potential for HHW to remain in the solid wastestream.

Recyclable Household Hazardous Materials: This alternative can reduce the volumes of latex paint, motor oil, antifreeze and batteries entering the solid wastestream. Since this material accounts for approximately 50 percent of the total volume of waste received at the County's HHW collection events, providing a collection program for these materials alone, or in communities where permanent HHW facilities are not feasible, could remove a substantial percentage of HHW from the wastestream.

Periodic Collection: Because they are offered once or twice a year in any one community, periodic events can only begin to address the issue of proper disposal since between collection events there is no alternative means of proper disposal available. They are, however, a very effective method of educating the public about the problem.

Curbside HHW, Mobile HHW Collection, Permanent Fixed HHW Collection Facilities: All three of these alternatives provide regular means of proper disposal for all types of HHW and, therefore, have the best potential for reducing the amount of HHW entering the solid wastestream.

6.5 Time Frame for Implementation

All of the alternatives considered in this evaluation could be implemented in the short-term period (1991-1995).

6.6 Facility Needs

Public Education: No facilities required.

Load Checking: Load checking programs would be carried out at existing solid waste transfer stations and landfills. Support equipment, such as storage containers, would be necessary for any HHW collected as a result of the program.

Curbside HHW: Sorting, packaging and temporary storage facilities would be needed to properly manage any HHW collected as part of a curbside program.

Recyclable Household Hazardous Materials: Collection and storage facilities, either temporary or permanent, would be required for collecting these materials.

Mobile HHW Collection: A mobile collection unit, including areas for collecting, sorting, identifying (laboratory capabilities) and packaging the HHW collected, office space and safety equipment, would be needed. This type of unit has been designed for King County Washington's program by Chempro, a private company which has recently started marketing their product in California.

Periodic Collection: No special facilities are required to implement this alternative. Periodic collection events conducted in the County to date have been located at schools, fairgrounds, and city or county owned parking lots and service yards.

Permanent Fixed HHW Collection Facilities: A permanent HHW facility should include a paved area, a laboratory, an equipment storage area and buildings for temporary storage of the HHW collected. Pre-fabricated storage containers could be used as opposed to designing and constructing permanent structures. Office space for record keeping and preparation of shipping documents may be located in conjunction with the permanent facility itself or at some other city or county location.

6.7 Consistency with Local Policies, Plans and Ordinances

All of the proposed alternatives evaluated in this element are consistent with the County's HWMP. Any permanent facilities that

would be required as a part of a Curbside HHW, Recyclable Household Hazardous Materials, Mobile HHW Collection or Permanent Fixed HHW Collection program would require review by the local planning, fire and health agencies. This review would include any necessary environmental review, findings of consistency with local and use plans and approval of any permits (e.g. conditional use permits, fire or hazardous waste storage) that would be required.

6.8 Institutional Barriers to Implementation

Public Education: The availability of trained personnel and the time required to develop and approve educational materials may present institutional barriers that could delay implementation of an effective public education program. However, these institutional barriers are not considered to be significant.

Load Checking: Pursuant to the State Water Resources Control Board (Section 2523 of Title 23, California Code of Regulations), landfill operators are required to have load checking programs. Hazardous waste facility permits from the California Department of Health Services (DHS) are not required for load checking unless the wastes would be stored at the facility for longer than 90 days. According to DHS management Memo 90-1, the facility, however, must apply to DHS for a hazardous waste generator identification number.

The California Integrated Waste Management Board does not consider load checking programs to be a significant change in the operations or design of a solid waste facility and would not require a permit modification. However, prior to beginning a load checking program, the transfer station/landfill operator must submit a Solid Waste Facility Permit modification to the Local Enforcement Agency (LEA), in this case the County's Division of Environmental Health, so that the LEA can determine the level of significance of the change. An updated Report of Facility Information, completely describing the load checking program, must be included. This process may present an institutional barrier that could delay implementation of an expanded load checking program.

Curbside HHW: The most significant institutional barrier for a curbside HHW program is the liability of operating such a program due to potential health and safety problems. Another potential barrier to implementation would be permitting. Currently DHS has not included curbside collection of HHW in their proposed "Permit By Rule" proposal. There is the potential that the "Permit By Rule" regulations would be expanded to include curbside, but

would not be effective until mid to late 1992. In the interim, proposals for curbside HHW collection would be considered by DHS on a case by case basis. Depending on the time required to process the request, this may be a barrier.

Recyclable Household Hazardous Materials: As of January 1, 1991, collection programs for recyclable HHW no longer require permit review by DHS as long as certain conditions are met.¹ Local health and fire department permits may, however, be required and may present an institutional barrier depending upon the complexity of the permits and time delays involved.

Mobile HHW Collection: Currently, the "Permit by Rule Process" does not include mobile HHW collection. There is the potential that the "Permit By Rule" regulations would be expanded to include curbside, but would not be effective until mid to late 1992. Until such time that this process is in place, DHS will review requests for mobile collection programs on a case by case basis. This process may present an institutional barrier depending upon the complexity and the amount of time required to obtain approval from DHS.

Periodic Collection: In 1991, DHS will be establishing a "Permit by Rule" process for periodic collection programs.² If the local agency determines that its events can meet these standards, it can notify DHS of the proposed event. With proper notification, the event will be considered permitted but may be subject to inspection to insure that minimum standards are complied with. Until such time that this process is in place, agencies must continue to formally request approval from DHS in order to hold a periodic collection event. This process may present an institutional barrier depending upon the complexity and the amount of time required to obtain approval from DHS.

Permanent Fixed HHW Collection Facilities: DHS is in the process of developing a "Permit by Rule" process for permanent HHW facilities. Until such time that this process is in place, agencies wishing to site a permanent facility must apply to DHS for approval of an Operations Plan. This review may involve considerable time delay and cannot occur until after local approval is obtained.

At the local level, the facility will require review by the planning department. Environmental review will be included as a part of this process. Depending on the proposed location of the facility and whether or not the approval of the project at that location is a discretionary act, the facility may be subject to the Local Assessment Committee permit process established by AB

2948 (Tanner, 1986). This planning review process could result in considerable delay in obtaining the necessary permits and approvals if either an Environmental Impact Report or the Local Assessment Committee review is required. Additionally, permits will be required by the local Fire Department and County Environmental Health.

6.9 Public Acceptance

Public education, Load Checking: This criteria does not apply to these alternatives.

Recyclable Household Hazardous Materials, Curbside, Mobile Periodic and Permanent Fixed HHW Collection: The siting of HHW storage facilities as a part of any one of these alternatives may create public controversy, depending upon the location of the facility in relation to residential neighborhoods and the extent of any environmental impacts identified.

6.10 Impacts on Local Job Markets

Public Education, Load Checking: These alternatives have the potential to create new jobs depending on the extent of the expansion of the existing programs.

Mobile, Periodic HHW Collection: These alternatives have the potential to create temporary jobs depending on the frequency that collection events are offered and whether or not a local hazardous waste management firm is hired to collect, package and transport the waste received.

Recycling Household Hazardous Materials, Curbside, Permanent Fixed HHW Collection: These alternatives have the potential to create one or two jobs for each program initiated. These positions would involve a basic level of training and technical expertise in Hazardous Materials Management.

6.11 Compatibility with the Existing Hazardous Waste Management Plan

Public Education: As stated in Section 3.0, Policy No. 6-2 encourages the County and the cities to expand their HHW public education programs. Therefore, any public education programs developed as a part of this plan would be consistent with the HWMP.

Load Checking: This criteria does not apply to these alternatives.

Recyclable Household Hazardous Materials, Curbside, Mobile Periodic and Permanent Fixed HHW Collection: As stated in Section 3.0, there are a number of goals and policies in the CHWMP that encourage the development of HHW collection programs. Therefore, any program that would accomplish these goals and policies would be consistent with the HWMP. As a part of the permitting process for the siting of any permanent HHW storage facilities required as a part of any of these alternatives, a finding of consistency with the HWMP siting criteria would be included. In compliance with the HWMP, a Health and Safety Risk Assessment of the facility is necessary.

6.12 Implementation Costs in Short and Medium Term

Detailed cost information is presented in section 8.0 for each of the HHW alternatives selected for implementation by the County.

Public Education: The costs to develop and implement a countywide public education and information program which will be implemented in the short and medium term, will be shared by all communities in the County. Such a program is vital to the effectiveness of all of the other alternatives considered for implementation. The cost for a countywide HHW education and public information program is estimated at \$73,890 annually.

Load Checking: The cost to expand the existing load checking programs vary with each facility. Increased labor costs are absorbed into the overall operation of the solid waste facilities as the staff involved in load checking usually perform other duties as well. Upgraded waste storage facilities will be required for each landfill and transfer station within the County except Vandenberg AFB which has adequate storage facilities. The Cities of Santa Maria and Lompoc will be constructing a permanent fixed HHW facility at their landfills that will also be used for load checking storage. The capital costs for these facilities will be approximately \$117,000 to \$175,000 each. The County will upgrade their load checking storage areas at two landfills and the South Coast Transfer Station at a cost of approximately \$80,000 for each facility.

Curbside HHW: The operating costs associated with curbside HHW programs would be much higher than any of the other alternatives being considered because of the labor involved. A vehicle designed to collect and transport HHW safely would need to be purchased. In addition, storage facilities comparable to those needed for a permanent fixed HHW program would be necessary. Therefore, the short and medium term costs of this alternative would be higher than the costs of any of the other alternatives.

The City of Los Angeles experienced costs of \$450 per participant household during their pilot door-to-door HHW program in 1988-89. These costs included labor and disposal.

The cost of curbside waste oil programs are minimal as most are part of the regular curbside recycling programs. See the SRRE for detailed costs of curbside collection programs. Lompoc's waste oil collection program is the exception as it is separate from their curbside recycling program. Since Lompoc's waste oil program has only recently been implemented, it is too early to evaluate the cost of operating this program. These figures will be available in subsequent drafts of the HHWE.

Recyclable Household Hazardous Materials: The short and medium term costs of this alternative are low in comparison to any of the other collection alternatives. The costs to site collection facilities for RHHM, approximately \$8 to 10,000, would be substantially lower than any of the other collection facilities being considered. The costs to recycle the materials collected would also be much lower than the costs to manage non-recyclable HHW, making the operational costs of this alternative less than those of the other alternatives. However, only 50 percent of the HHW would be eligible for acceptance into this type of facility, with it being the "less hazardous" half of the spectrum.

Mobile HHW Collection: The major expense to implement this alternative would be the lease or purchase of a mobile HHW collection unit. According to Chempro, the company that made a similar unit for King County Washington, to lease a unit would cost \$4,000 per day. To purchase a unit would cost \$120,000. All labor and disposal costs would be additional and would be comparable to the costs for periodic collection events (approximately \$100 per participant).

Periodic Collection: Labor and disposal costs for periodic collection events in Santa Barbara have historically averaged \$100 per participant. When education and publicity costs are added, the cost increases to approximately \$115 per participant. These costs may increase over time as a greater percentage of the HHW collected will be sent to treatment facilities as opposed to landfills.

Permanent Fixed HHW Collection Facilities: The capital cost to construct a permanent HHW facility using pre-fabricated storage units is estimated at \$118,000. This figure is very comparable to the costs of purchasing a mobile collection unit. However, with a permanent facility open on a weekly basis, it would serve a greater percentage of the public and, therefore, would be more

cost effective in the long term. In addition, because of the ability to store wastes for a longer period of time at a permanent facility (up to one year as opposed to 144 hours at a mobile facility or periodic collection event), there is the potential for the HHW to be managed in a more cost effective manner, reducing disposal costs. Additional costs would be required for environmental review and permitting. These costs could range from \$20,000 to \$150,000 depending upon the extent of the environmental review necessary.

6.13 End Uses/Market Availability

HHW collection is not market driven, therefore, end uses and market availability will not determine what types of HHW are targeted for collection through Curbside HHW Collection, Periodic HHW Collection, Mobile HHW Collection or Permanent Fixed HHW Collection.

There are currently markets for some recyclable household hazardous materials, making the **Recyclable Household Hazardous Material** alternative the only HHW management method which could be effected by market availability. The markets for motor oil and latex paint currently do not provide any net revenue. However, having end uses for these two materials helps to reduce the overall operating costs of the hazardous material collection program by avoiding more expensive disposal methods (i.e., incineration).

7.0 SELECTION OF HHW MANAGEMENT PROGRAMS

The HHW management programs recommended for implementation are consistent with the County's existing Hazardous Waste Management Plan and are proven programs, not only in the County of Santa Barbara, but in other jurisdictions throughout the state. The County and cities will be taking a regional approach in managing HHW based on wastesheds rather than by incorporated and unincorporated area jurisdictions. The HHW alternatives chosen for implementation for this HHWE are:

1. Increased Public Education and Information Countywide;
2. Establish Permanent Fixed HHW Collection Facilities in three locations throughout the County;
3. Continuation of the Vandenberg AFB Permanent Fixed HHW Collection Facility;

4. Improved Load Checking programs at all solid waste landfills and transfer stations;
5. Continuation of Periodic HHW Collection Events until Permanent HHW Collection Facilities are operational;
6. Continuation of Waste Oil Collection on curbside recycling programs and increased drop-off locations throughout the County; and
7. Establish a Recyclable Household Hazardous Materials Collection program in one North County Location.

The HHW management alternatives not selected for implementation are Curbside HHW Collection and Mobile HHW Collection based on the criteria evaluations and discussions in section 6.0 (Evaluation of HHW Alternatives) of this HHWE. Both of these alternatives pose a greater risk to the environment and human health relative to a permanent fixed HHW collection facility. Additionally, based on the analysis contained herein, these alternatives also prove to be less cost effective than a permanent HHW collection facility.

7.1 HHW Alternative Selections

This section provides details for each of the alternatives selected for implementation as well as rationale for the selections based on the analysis in section 6.0 of this element, handling and disposal methods for the HHW realized from each alternative, and facilities necessary for program implementation. Each alternative, except education and public information, is broken into two sections in order to discuss separate recommendations for the North and South County since it is recommended that the County and cities take a regional approach to HHW management.

7.1.1 Education and Public Information

No HHW management system would be complete without a solid education and public information program. Unless residents are aware of what constitutes a hazardous waste and the potential dangers associated with mismanagement of these wastes, collection program participation will be minimal for all of the planned programs. In addition, the public must know how to properly store and transport their hazardous waste in order to reduce the potential risks associated with the collection process itself, whether it be a permanent HHW collection facility or curbside waste oil collection program.

Education and public information is an integral part of publicizing each of the HHW management alternatives. Simply advertising the event or facility will not necessarily be enough to educate area residents on how to participate properly. The advertisement must also include a list of specific materials or products targeted for collection and mention proper transportation methods. As described in the Existing Conditions section of this element (section 3.4), extensive promotion is used to publicize the existing HHW programs including use of all local media as well as flyers, posters, banners, and utility bill inserts.

In order to be effective, the existing public education and information program must be expanded. The most effective means of accomplishing this would be for the County to develop a package education and public information campaign that would include a program logo/theme and public service announcements for radio and television.

In addition to these promotional activities, the existing brochure and educational presentations (section 3.4) will need further development. These activities offer information beyond just identifying household toxics and proper disposal options. Discussions regarding environmental and human hazards related to improper disposal of HHW, recommendations on non-toxic or biodegradable alternatives for chemical household products, and methods of HHW source reduction are also included. The recommended expansion of the current education program will be to offer this information in Spanish as well. In addition, the outreach for the educational presentations should be expanded in order to increase the number of presentations given annually.

In order to develop a consistent education and public information program, and to be most efficient financially, this plan recommends that the County assume the responsibility of developing a program to be used countywide (as opposed to each city and the County, or each individual watershed, developing their own public education and information program). A consolidated campaign would also use the existing media system most efficiently, since all three television stations and a major newspaper have countywide audiences. It would also reduce the amount of overlapping or confusing information that would occur if three or more separate education and public information campaigns were developed.

In order to implement this recommendation, the County Public Information Specialist would oversee subcontractors in technical assistance, development of the campaign logo and theme,

production of television, print and radio media, and presentation of the campaign. Each participating city could then help with the distribution of any informational brochures or billing inserts developed as a part of the campaign. The responsibility for funding this effort could be shared by all three wastesheds since each has the best mechanism for generating revenue through its landfill tip fees.

Specific promotional and educational activities for the each of the planned HHW alternatives are described below, as well as proposed improvements in public outreach, if needed.

Periodic HHW Collection Events will continue to be publicized using the usual promotional vehicles (advertisements in local media, local news stories, flyers, banners, notices in utility bills, etc.), with the public outreach program consisting of the educational presentations to schools and community groups. No educational or promotional improvements are recommended for this alternative because periodic HHW collection events will be phased out with the implementation of permanent facilities.

The Load Checking Programs must offer the customer an option for proper disposal of their HHW when these materials are returned to them. Flyers listing all of the HHW collection options available including locations, operating times and dates of the HHW collection facilities or events must be available at each of the solid waste landfills and the transfer station within the County. This is an improvement to the existing load checking program since flyers have not always been available to customers. Additionally, similar flyers or notices must be distributed by the trash haulers if HHW is found in trash cans on the residential garbage routes. Currently the HHW, if found in the trash, is removed and left behind without explanation. Again, customers must know where they can properly dispose of these materials.

Curbside Waste Oil Collection and Waste Oil Collection Drop-off Locations are part of the curbside recycling program. Promotion for curbside, including oil, are discussed in the Source Reduction and Recycling Element for the County and cities. The residential curbside programs are currently promoted by newsletters, door hangers, brochures, and direct mail. Refer to the Public Education and Information Component in the County of Santa Barbara SRRE for detailed information on the planned promotion and education related to the curbside recycling program.

Once the Permanent Fixed HHW Collection Facilities and the Recyclable Household Materials Collection Facility are operational it will be imperative that an effective education and public information program be in place. Without such a program, participation rates would not be maximized. Information about the problems of improper disposal of HHW and the times that the facilities are open would need to be distributed through informational brochures, public service announcements, utility bill inserts and public presentations on an on-going basis to insure use of the facilities.

7.1.2 Permanent Fixed HHW Collection Facilities

South County: The siting process for a permanent HHW collection facility in the South County has begun with the facility design and implementation plan completed. The project is currently in the environmental review stage which includes the evaluation of two alternative locations. Once the exact site has been determined, an Operations Plan will be submitted to DHS for approval. This facility should be operational in late 1992. The proposed location will offer a centrally located facility which that could be used by all South County residents including the cities of Santa Barbara and Carpinteria and the unincorporated South County residents. The facility will be open at least two days a week giving residents a convenient, consistent way to dispose of all types of HHW.

North County: In the North County two permanent HHW collection facilities are planned. Preliminary siting studies have been completed to determine the best locations for these facilities. The cities of Lompoc and Santa Maria will each be siting a permanent HHW collection facility. These facilities will also serve the unincorporated North County area residents who live in those wastesheds. The City of Guadalupe will be able to use the Santa Maria HHW facility since they contribute solid waste to that landfill.

Because of the small population base and the implementation of other alternatives, the siting of a permanent HHW facility is not recommended for the Santa Ynez Valley wasteshed. However, a facility to collect only recyclable HHW is in the planning stages for the use of Santa Ynez Valley residents, including the City of Solvang. Additionally, annual HHW collection events will be continued in this area to handle the non-recyclable HHW. Another option would be for Valley residents to use either the Lompoc or Santa Maria permanent HHW facilities between the periodic events. This would require a joint powers agreement between the County and the participating cities.

Vandenberg AFB currently offers base residents a permanent HHW drop-off facility. No additional facility will be necessary.

Rational for Choosing Alternative: Permanent HHW collection facilities provide a convenient, long-term disposal option with the greatest potential for participation from local residents. Potential hazards associated with transporting HHW to a central location and the storage of HHW exist. However, a permanent facility offers a more controlled environment making it safer than either the mobile or curbside HHW collection alternatives. A permanent facility also offers the County and cities the most cost effective way to handle HHW.

Handling and Disposal Methods: The facilities will be staffed by one to two full-time technicians, except for the Lompoc facility which will have one part-time technician. The staff will unload vehicles, sort, segregate bulk and lab pack all wastes and complete all necessary inventory sheets and manifests. Some hazardous waste testing will be required to identify unknowns, determine hazard classifications and detect chlorinated substances in solvents and motor oil. Materials will be stored on-site until sufficient quantities are collected and packaged for transportation to a recycling, treatment or disposal facility by a licensed hazardous waste hauler. Wastes may be stored on-site up to one year as this would be a fully licensed TSDF for HHW.

Facilities Necessary for Implementation: The permanent HHW facilities will include a paved area, a laboratory, an equipment storage area and buildings for temporary storage of the HHW collected. Pre-fabricated storage containers are planned for the South County facility. Pre-fabricated units could be used as opposed to designing and constructing permanent structures for the North County facilities as well. Office space for record keeping and preparation of shipping documents may be located in conjunction with the permanent facility itself or at some other city or county location.

7.1.3 Load Checking Programs

South County: Expansion of the current load checking programs at the County owned and operated Tajiguas Landfill and Transfer Station are currently underway. An additional staff person has been added to each facility to ensure a more thorough load monitoring program. The existing program, as described in Section 3.5 of this element, will continue to have check points throughout the solid waste processing system, such as questioning the customer at the scales, spot checking loads and removing any

hazardous waste found during sorting, separation, and/or the burial process. Personnel will be given extensive training in the identification of hazardous waste. In addition, training on proper HHW disposal options shall be included so that personnel can educate residents and haulers attempting to dispose of hazardous waste through the solid waste facilities.

North County: Expansion of the current load checking program at the County owned and operated Foxen Canyon Landfill is currently underway. An additional staff person has been added to the facility to ensure a more thorough load monitoring program. The Lompoc, Santa Maria and Vandenberg AFB Landfills have also improved existing load checking programs with more thorough checking procedures. The existing programs, as described in Section 3.5 of this element, will continue to have check points throughout the solid waste processing system, such as questioning the customer at the scales, spot checking loads and removing any hazardous waste found during sorting, separation, and/or the burial process. Personnel will be given extensive training in the identification of hazardous waste. In addition, training on proper HHW disposal options shall be included so that personnel can educate residents and haulers attempting to dispose of hazardous waste through the solid waste facilities.

Rational for Choosing Alternative: Load checking programs are already required at all solid waste landfill and transfer stations by the State Water Resources Control Board. Therefore, this alternative will be included in the HHW management plan for this element. The load checking alternative is a good supplement to the HHW management program when public education and adequate HHW disposal and recycling options are available. Load checking would serve as the final check point for extracting HHW from the solid wastestream, and will also serve as an educational tool for those customers attempting to dispose of HHW through the solid waste facilities.

Handling and Disposal Methods: HHW found during load checking will be sent back with the customer with information on proper disposal options. Hazardous waste found later in the solid waste processing system will be stored in a designated area for proper disposal through either the HHW program or through a private hazardous waste hauler. Load check programs may store HHW up to 90 days on site.

Facilities Necessary for Implementation: All solid waste landfills and transfer stations within the County already have existing load checking and diversion programs in place. However, storage facilities for the diverted HHW must be upgraded at all

facilities (except Vandenberg AFB) in order to meet local and state requirements for hazardous waste storage. Santa Maria and Lompoc will meet these requirements with their planned permanent fixed HHW facilities which will be located at the landfill. All of the County operated solid waste facilities will require upgrades, such as secondary containment, covered storage, proper segregation, and record keeping capabilities.

7.1.4 Periodic HHW Collection Events

South County: In the last six years, periodic HHW collection events have been offered to residents throughout the County, aiding in educating the public about the proper disposal of HHW and the use of non-toxic alternatives. The one-day events will be phased out with the implementation of the permanent HHW collection facilities as these events are costly and, when compared to a permanent facility, are not as effective in providing a regular and convenient method of properly disposing of HHW. With the South County permanent facility nearing completion, only one or two more periodic collection events will be offered for unincorporated South County, Santa Barbara and Carpinteria city residents.

North County: Lompoc will continue to offer annual HHW collection events until their permanent HHW collection facility is operational, which is anticipated to occur within the short-term time frame (1991-1995). This facility will service both city and unincorporated North County area residents within the Lompoc Landfill wasteshed.

The County will continue to offer annual HHW collection days in the Santa Ynez Valley for the Solvang and unincorporated North County residents as no permanent HHW facility is planned for Santa Ynez Valley.

Santa Maria, Guadalupe and unincorporated North County residents in the Santa Maria Landfill wasteshed area will no longer be offered one-day events. The City of Santa Maria will concentrate on siting a permanent HHW facility at their landfill. This facility should be operational in 1992.

Vandenberg AFB has discontinued periodic collection events since their permanent HHW collection facility is currently operational.

Rational for Choosing Alternative: Periodic HHW collection events are a good temporary solution to the immediate HHW disposal needs of County residents as a lengthy permitting process is not required to conduct these events. The events are

also very effective in helping to educate the public about the problems associated with HHW. However, periodic events are very expensive relative to a permanent facility and they do not provide an on-going and convenient method for HHW disposal. In addition, with the large concentration of participants that occur at periodic events, they have a higher environmental and human safety risk when compared to permanent facilities. Therefore,

periodic events will be phased out with the implementation of permanent collection facilities throughout the County.

Handling and Disposal Methods: After HHW is removed from the participants' vehicles, a licensed contractor segregates, bulks and packages the waste. The hazardous waste and recyclable hazardous materials are then shipped to an appropriate hazardous waste Treatment, Storage and Disposal Facility (TSDF) within 72 hours of the event, as per DHS regulations.

Facilities Necessary for Implementation: Because existing sites are used for the periodic events (e.g., County road yards, parking lots, fairgrounds), no additional facilities are necessary to continue HHW collection days. Precautions are taken to protect the sites during the one-day events. These precautions, including plastic ground coverings and temporary tents to cover the chemical separation areas, are required by DHS and will continue to be included for all periodic HHW collection events.

7.1.5 Waste Oil Collection

South County: The Waste Oil Collection program in the South County will involve a variety of collection methods including oil collection on the curbside recycling routes, waste oil drop-off locations for those residents not serviced by curbside programs, and waste oil collection at the periodic HHW collection events and eventually, at the permanent HHW collection facility. As stated in Existing Conditions (section 3.3), the curbside program services 26,350 homes in the South County including the Cities of Santa Barbara and Carpinteria, and the unincorporated South County. Those residents not serviced by curbside will have the opportunity to utilize two neighborhood drop off locations in Santa Barbara. The Community Environmental Council will be working together with the County and the City of Carpinteria to site a pilot waste oil collection facility at an appropriate site in the City of Carpinteria. This facility would be operational in late 1991. The City of Santa Barbara will work to site a similar facility within its boundaries. All South County residents may recycle their waste oil at the periodic HHW

Santa Barbara and eventually at the permanent HHW collection facility which will be operational in 1992.

North County: A variety of collection methods will be offered for residents of the North County including oil collection on curbside recycling programs, waste oil drop-off locations, and waste oil collection at the periodic HHW collection events and, eventually, permanent HHW collection facilities. As stated in Existing Conditions (section 3.3), the curbside program currently services 13,400 homes in the unincorporated North County areas including areas near Lompoc, the Santa Ynez Valley and Orcutt, and 2,600 homes in the City of Solvang.

The City of Lompoc is currently implementing a waste oil collection program. In the Lompoc program, residents are provided with bags and a filter for waste oil which can be dropped off at the City Corporate Yard. City residents, as well as unincorporated County residents in the Lompoc watershed area may also drop off waste oil at the landfill or utilize annual HHW collection days and, eventually, the permanent collection facility.

The City of Santa Maria will be offering residents a curbside recycling program within the short-term (1991-1995) which will include waste oil. In addition, once the permanent HHW facility is operational, residents may dispose of their waste oil there as well. Currently, residents may dispose of waste oil at the Santa Maria Landfill.

The City of Guadalupe will set up a waste oil drop off location within its boundaries for use by city residents. Additionally, Guadalupe residents may dispose of their waste oil at the permanent HHW collection facility proposed to serve the residents of the Santa Maria Valley.

Vandenberg AFB will continue to offer waste oil drop off at the Auto Hobby Shop.

Rational for Choosing Alternative: Motor oil is the largest single material, by volume collected through the existing HHW collection program. Motor oil, although not currently listed as a hazardous waste by EPA and DHS, must be managed as a hazardous waste. Oil can have devastating effects on the environment when mismanaged. Ground water contamination is of greatest concern in the County. Additionally, end use markets for waste oil are currently available. Revenue from the sale of waste motor oil can subsidize the collection of this material. Greater revenue

may be realized as the used oil market improves with rising international crude prices.

Handling and Disposal Methods: Waste oil collected from all of the collection programs (curbside, RHHM, periodic or permanent) will be stored in drums or tanks with appropriate secondary containment as required by the local fire authority. A waste oil recycler/hauler will be contracted to pick up or pump the oil on a regular schedule depending on volumes collected. Chlor-D-Tech tests, to determine if the oil contains any chlorinated solvents which contaminate oil, will be performed before removal. If the oil is contaminated an appropriate hazardous waste hauler will be contracted to transport the oil to an incineration facility. Oil may be stored on-site for up to one year at permitted HHW TSDF's, and up to six months at RHHM facilities. Waste oil from curbside and load checking programs may be stored on-site for up to 90 days.

Facilities Necessary for Implementation: As stated above, either tanks or drums are appropriate as long as adequate secondary containment, fencing to protect from vandalism, and all other local fire code requirements have been met. Since an extensive waste oil collection program is currently in place, no additional facilities will be required except where siting has not yet occurred (Carpinteria, Santa Barbara and Guadalupe).

7.1.6 Recyclable Household Hazardous Materials Collection

Currently a recyclable household hazardous materials (RHHM) collection facility is planned to be centrally located to serve the Santa Ynez Valley. RHHW collection facilities planned throughout the County will accept recyclable materials, such as latex paint, motor oil, antifreeze and car batteries. The facility is currently in the planning process and should be operational within the short-term planning period. This facility will service all residents within the Foxen Canyon Landfill watershed area including the City of Solvang and unincorporated North County residents throughout the Santa Ynez Valley.

Rational for Choosing Alternative: Based on the relatively small population base of the Santa Ynez Valley, a permanent HHW collection facility is not feasible at this time. A RHHW facility offers the next best option since these materials account for an estimated 50 percent of the HHW generated. Although the extensive environmental review process would not be required, the landfill will need to have their operations plan revised to include the RHHM facility.

Handling and Disposal Methods: This facility will not be a licensed HHW TSDF, therefore, the recyclable materials can only be stored on-site for six months. The materials will be bulked on-site by trained County staff, and a licensed HHW hauler will transport the materials to an appropriate recycling facility.

Facilities Necessary for Implementation: A bermed, cement slab for secondary containment will be required for proper storage and bulking of the RHHM's. Additionally, the area will be covered, completely fenced, and necessary signage and fire protection will be incorporated into the area.

7.2 Estimated Solid Waste Diversion

HHW cannot be legally disposed of at solid waste landfills and transfer stations. Therefore, materials diverted through the HHW programs do not count towards the original AB 939 regulation diversion goals of 25 percent by 1995 and 50 percent by the year 2000. Instead, the goals of this HHWE will be to reduce and eliminate the amount of HHW currently entering the municipal solid waste landfills and to ensure that all residents have convenient and safe HHW disposal options available to them.

For the purposes of this element, the estimate of HHW quantities and types anticipated to be collected through the planned HHW management system is based on historical data from the existing HHW collection program. Form CIWMB-303 (Table 7.2(a)) has been used, as per the AB 939 regulations, to establish the estimates for diversion countywide. Tables 7.2(b) and (c) detail estimated quantities of HHW and RHHM for each program and/or jurisdiction.

7.3 End Uses for Diverted Materials

Currently the only markets which exist for materials collected through the HHW management programs are for used motor oil, anti-freeze, auto batteries and latex paint. As discussed in section 6.10 of this element, these markets do not generate revenue for the programs. Instead they help to subsidize the RHHM programs by avoided hazardous waste disposal costs. Recycling fees are minimal compared to the hazardous waste disposal options of either treatment, incineration or landfilling. The remaining HHW collected, such as oil-based paints, solvents and chemical products including pesticides, corrosives, and pool chemicals, is treated, incinerated or buried in a hazardous waste landfill. The only end-uses identified for any of these non-recyclable HHWs is in a "fuels program" where flammable liquids are mixed with other fuels to generate energy. Most non-chlorinated solvents and oil-based paints from the HHW management programs are sent

TABLE 7.2(A)

ESTIMATED FUTURE DIVERSION

HOUSEHOLD HAZARDOUS WASTE COLLECTION INFORMATION

CIWMB-303 (1/90)

Estimated Annual HHW Quantities - Countywide

Name of Local Agency:	Haz. Waste Generators: County of Santa Barbara City of Lompoc, City of Santa Maria and Vandenberg Air Force Base			Phone:
			Calif.	
Address:	City:	County:	State:	Zip:
HHW and RHHM anticipated from all HHW collection programs (annually) in the Cities of Carpinteria, Santa Barbara, Solvang, Lompoc, Santa Maria and Gaudalupe, and the Unincorporated North and South Santa Barbara County and Vandenberg Air Force Base.				

(Please Use Applicable Units of Measurement)

Waste Category	Gallons	Pounds	Number of Containers	Number of Drums (55 gal)	Management Method
A. Flammable					
1. Used Oil	71,000				Recycle
2. Paints	12,500				Recycle
a. Latex					
b. Oil Base	*(included with flammable solvents, etc.)				
3. Solvents, thinners, and stains	25,200 (includes oil-based paints)				Incinerate/Treatment
4. Gasoline and oil (mixed)					
5. Aerosols (excluding pesticides/herbicides)					
6. Other					
FLAMMABLE SUBTOTAL	108,700				various (see above)

Management Methods					
Ru Re-used	T1	Transfer Station	T-3	Stabilization	
Rc Recycled	T-1	Incinerator	D	Land Disposal	
Bf Blended Fuel	T-2	Aqueous Treatment	Other		

Waste Category	Gallons	Pounds	Number of Containers	Number of Drums (55 gal)	Management Method
B. Pesticides					
Such as herbicides, insecticides, fungicides, etc.	1,175	_____	_____	_____	Land Disposal/ Incinerat
PESTICIDE SUBTOTAL	1,175	_____	_____	_____	_____
C. Corrosives					
1. Acids					
a. Oxidizing	_____	_____	_____	_____	_____
b. Non-Oxidizing	_____	_____	_____	_____	_____
2. Alkaline	_____	_____	_____	_____	_____
CORROSTVES SUBTOTAL	875	_____	_____	_____	Land Disposal/ Treatment
D. Oxidizers					
Excluding acids	_____	_____	_____	_____	_____
OXIDIZERS SUBTOTAL	225	_____	_____	_____	Land Disposal/ Treatment
E. Miscellaneous					
1. Car Batteries	_____	_____	_____	_____	_____
2. Dry Cells	_____	_____	_____	_____	_____
3. Mercury	_____	_____	_____	_____	_____
4. Other (Anti-freeze)	1,050	_____	_____	_____	Recycle
MISC SUBTOTAL	_____	_____	_____	_____	_____
TOTAL WASTE COLLECTED	112,025	_____	_____	_____	various

Household Hazardous Waste Element

Table 7.2(b): Estimated quantities of motor oil collected from residential curbside, drop-off locations and permanent HHW facilities.

Program	Gallons Per Year
South County Curbside	10,000
North County Curbside	15,000
Lompoc Drop-off/Perm. HHW Facility	12,000
Santa Maria Drop-off/Perm. HHW Facility	12,000
South County Perm. HHW Facility	10,000
Santa Barbara Drop-off	5,000
Carpinteria Drop-off	3,000
Vandenberg AFB Drop-off	2,000
Guadalupe Drop-off	2,000
Total Gallons Per Year	71,000

Table 7.2(c): Estimated quantities of HHW and RHHM materials collected from permanent fixed HHW and RHHM facilities.

Wasteshed	Material*					
	LA	FL	AF	PE	CO	OX
South County	6,000	13,500	500	600	450	100
Lompoc	2,000	4,000	150	200	150	50
Santa Maria	3,500	7,500	300	350	250	75
VAFB/Foxen Canyon	1,000	200	100	25	25	--
Total Annual Gallons	12,500	25,200	1,050	1,175	875	225

* Waste Category: LA: Latex Paint
 FL: Flammables (Oil-based Paint and Solvents)
 AF: Antifreeze
 PE: Pesticides
 CO: Corrosives
 OX: Oxidizers

to a fuels program. The cost of disposing of flammable liquids through this program is relatively high compared to the recycling fees for RHHM, although, less than the cost of hazardous waste incineration or landfilling.

8.0 IMPLEMENTATION

Each alternative to be implemented is discussed below, including the agency responsible for implementation of the alternative and the estimated implementation costs. The Summary of Costs chart (section 9.0) reflects the actual costs to each community for programs implemented within that community.

The implementation tasks and schedules for each alternative is presented in section 8.6. The implementation schedules presented for each city and unincorporated area in the County reflects the regional HHW management approach suggested in this HHWE.

8.1 Public Education and Implementation

The County of Santa Barbara will be responsible for developing a countywide education program. The details of this program are described under Education and Public Information (section 7.1.1). The costs of the program are listed in Table 8.1.

Table 8.1: Public Education and Implementation Program Costs	
Item	Cost
1. Development of theme, television, radio, brochure concepts (consultant)	\$ 13,250
2. Production of television ad (COX Cable)	100
3. Purchase of television ad time (annual expense)	20,000
4. Production of radio ad	200
5. Purchase of radio ad time (annual expense)	12,000
6. Printing costs - brochure	5,000
7. Additional printing costs	3,000
8. Direct mail costs (119,226 pieces)	9,540
9. Staff person (approximately 20 hours/month)	10,800
Total	\$ 73,890

The County and each of the participating cities will be responsible for distributing the information produced.

8.2 Load Checking

All solid waste landfills and the transfer station within the County of Santa Barbara will provide a hazardous waste storage area for diverted materials as part of expanded load checking programs. Santa Maria, Lompoc and Foxen Canyon Landfills will provide load checking storage at their planned permanent HHW and RHHM facilities. Costs for these facilities are in Tables 8.3(b), 8.5(b) and 8.5(c). The estimated cost of implementing the load checking alternative at the South Coast Transfer Station and Tajiguas Landfill is in Table 8.2.

Table 8.2: Estimated costs of implementing the load checking alternative.

Item	Cost
1. Siting and permitting	\$ 25,000
2. Construction	58,800
3. Staff (annual)	20,000
4. Disposal	18,500 - 185,000

The County of Santa Barbara is adding additional personnel at both the Foxen Canyon Landfill and the South Coast Transfer Station in order to expand their load checking program.

8.3 Recyclable Household Hazardous Materials Facilities

The cities of Carpinteria, Santa Barbara and Guadalupe will be responsible for siting facilities to collect waste motor oil from their city residents. These facilities would be funded with solid waste tip fee revenues generated at the appropriate regional solid waste facility. The costs to site and operate each of these facilities is in Table 8.3(a).

Table 8.3(a): Estimated costs to site and operate recyclable household hazardous materials facilities.

Item	Cost
1. Set up costs	\$ 5,000 - 10,000
2. Operation - staff and disposal (based on volume of materials collected)	2,000 - 6,000

The County of Santa Barbara will be responsible for siting a Recyclable Household Hazardous Materials Facility at the Foxen Canyon Landfill in Santa Ynez Valley. The facility would collect latex paint, motor oil, batteries and antifreeze. It would serve the city of Solvang and the unincorporated portions of the Santa Ynez Valley. The cost to construct and operate this facility is estimated in Table 8.3(b).

Table 8.3(b): Estimated costs to site and operate a recyclable household hazardous materials facilities at the Foxen Canyon Landfill.

Item	Cost
1. Set up costs	\$ 50,000
2. Staff	21,560
3. Disposal (based on volume of materials collected)	12,000 - 20,000

8.4 Periodic HHW Collection Events

The County of Santa Barbara will be responsible for continuing the periodic collection events in the Santa Barbara area until such time that a permanent collection facility is operating. The costs for a single event in Santa Barbara is currently \$215,101. This cost could increase depending on the volume of waste received and the per drum disposal cost charged by the hazardous waste contractor that packages and transports the wastes.

The County of Santa Barbara will also be responsible for providing periodic collection events for residents in the Santa Ynez Valley, including the City of Solvang. The current costs for a periodic event in the Santa Ynez Valley is \$52,000. This cost could increase depending on the volume of waste received and the per drum disposal cost charged by the hazardous waste contractor that packages and transports the wastes. This total cost could also decrease based on the amount of recyclable wastes collected at the proposed Recyclable Household Hazardous Waste Facility. (Recyclable HHW accounts for approximately 50 percent of the total volume of hazardous wastes received at the periodic events.)

The City of Lompoc will be responsible for continuing the periodic collection events in the Lompoc Valley until such time that a permanent collection facility is operating. These events would serve city residents as well as residents of the surrounding unincorporated area. The costs for a single event in Lompoc is currently \$75,000. This cost could increase depending on the volume of waste received and the per drum disposal cost charged by the hazardous waste contractor that packages and transports the wastes.

8.5 Permanent HHW Facilities

The County of Santa Barbara will be responsible for establishing a permanent fixed HHW facility that will serve both the incorporated and unincorporated communities on the South Coast. The County has already incurred the cost of the environmental review and permitting for the facility. The additional cost to construct and operate the facility are in Table 8.5(a).

Table 8.5(a): Additional Cost to Construct and Operate the South Coast Permanent Facility.	
Item	Cost
1. Construction	\$117,600
2. Staff	88,500
3. Disposal (annual, based on volume of waste collected)	150,000 - 200,000

The City of Lompoc will be responsible for siting and operating a permanent fixed HHW facility that would serve residents of both the incorporated and unincorporated areas of the Lompoc Valley. The County of Santa Barbara has already committed funds to assist with the siting and permitting of the facility. The estimated costs for implementing this alternative are in Table 8.5(b).

Table 8.5(b): Estimated Costs for Siting and Permitting the Lompoc Permanent Facility.	
Item	Cost
1. Construction	\$75,852
2. Staff	57,082
3. Disposal (annual, based on volume of waste collected)	10,100 - 101,000

The City of Santa Maria's proposed load checking facility will serve as a permanent fixed HHW facility one day per week. This facility would serve residents of both the incorporated and unincorporated communities of the Santa Maria Valley. The estimated costs for this facility are in Table 8.5(c).

Table 8.5(c): Estimated Costs for Siting and Permitting the Santa Maria Permanent Facility.

Item	Cost
1. Construction	\$175,240
2. Staff	89,310
3. Disposal (annual, based on volume of waste collected)	30,000 - 100,000

8.6 Implementation Tasks and Schedules

The following tasks and schedules are broken into regional watershed areas. All selected alternatives that apply to the area are reflected in each task schedule except the education and public information alternative which is detailed in section 10.4.2 of this HHWE. Please note that all tasks and schedules presented are for the short-term planning period. Tasks for the medium-term will consist of ongoing operations and monitoring (section 12.0) of these HHW management alternatives.

8.6.1 Implementation Tasks and Schedules for the South County

The following series of tables shows the implementation schedules for the City of Carpinteria, the City of Santa Barbara and the surrounding unincorporated areas of the South County.

Alternative: Establish Carpinteria Waste Oil Facility.		
Task	Date	Description
1	September 1991	Obtain approval and permits.
2	December 1991	Construct facility.
3	March 1991	Facility becomes operational.

Alternative: Establish Santa Barbara Waste Oil Facility.		
Task	Date	Description
1	March 1992	Scoping for appropriate location.
2	June 1992	Obtain approval and permits.
3	September 1992	Construct facility.
4	December 1992	Facility becomes operational.

Alternative: South County Curbside Waste Oil Collection.		
Task	Date	Description
1	Ongoing	Continue collection of waste oil as part of the South County residential curbside program. See SRRE for detailed curbside information.

Alternative: Expand Load Checking at Tajiguas Landfill and the Transfer Station.		
Task	Date	Description
1	June 1991	County adds additional staff to monitor load checking operations.
2	December 1992	County makes all necessary upgrades to transfer station and landfill.

Alternative: South Coast Periodic HHW Collection Days.		
Task	Date	Description
1	Ongoing	Continue periodic collection days until South Coast HHW permanent facility is on-line.

Alternative: Permanent HHW Facility to be located in Santa Barbara.		
Task	Date	Description
1	March 1992	Complete siting, permitting and CEQA related documentation.
2	June 1992	Construct facility.
3	September 1992	Staff and publicize facility.
4	December 1992	Facility becomes operational.

8.6.2 Implementation Tasks and Schedules for the Santa Ynez Valley

The following series of tables shows the implementation schedules for the City of Solvang and the surrounding unincorporated areas of the South County.

Alternative: Santa Ynez Valley Curbside Waste Oil Collection.		
Task	Date	Description
1	Ongoing	Continue collection of waste oil as part of the Santa Ynez Valley residential curbside. See SRRE for detailed curbside information.

Alternative: Expand Load Checking at Foxen Canyon Landfill.		
Task	Date	Description
1	June 1991	County adds additional staff to monitor load checking operations.
2	September 1992	County makes all necessary upgrades to transfer station and landfill (RHHM Facility).

Alternative: Santa Ynez Valley Periodic HHW Collection Days.		
Task	Date	Description
1	Ongoing	Continue periodic collection days through the short-term planning period.

Alternative: Recyclable Household Hazardous Materials Facility at Foxen Canyon Landfill.		
Task	Date	Description
1	June 1992	Obtain permits and modify operations plan.
2	September 1992	Construct facility at Foxen Canyon Landfill.
3	December 1992	Staff and publicize facility.
4	March 1993	Facility becomes operational.

8.6.3 Implementation Tasks and Schedule for North County

The following series of tables shows the implementation schedules for the City of Lompoc, the City of Santa Maria, the City of Guadalupe, Vandenberg AFB, and the surrounding unincorporated areas of the North County.

Alternative: Santa Maria Curbside Waste Oil Collection.		
Task	Date	Description
1	January 1991	Add residential waste oil to curbside.

Alternative: Establish Guadalupe Waste Oil Facility.		
Task	Date	Description
1	March 1992	Scoping for appropriate location.
2	June 1992	Obtain approval and permits.
3	September 1992	Construct facility.
4	December 1992	Facility becomes operational.

Alternative: Expand Load Checking at Lompoc, Santa Maria, and Vandenberg AFB Landfills.		
Task	Date	Description
1	Ongoing	VAFB load checking program.
2	June 1991	Add additional staff to assist with monitor load checking operations (Santa Maria and Lompoc).
3	September 1992	Make upgrades at Santa Maria and Lompoc landfills (HHW permanent facilities).

Alternative: Lompoc Periodic HHW Collection Days.		
Task	Date	Description
1	Ongoing	Continue periodic collection days until permanent HHW facility is on-line.

Alternative: Lompoc Permanent HHW Facility and Expanded Load Checking.		
Task	Date	Description
1	April 1992	Complete siting, permitting and CEQA related documentation.
2	June 1992	Construct facility.
3	September 1992	Staff and publicize facility.
4	December 1992	Facility becomes operational.

Alternative: Santa Maria Permanent HHW Facility and Expanded Load Checking Program.		
Task	Date	Description
1	March 1992	Complete siting, permitting and CEQA related documentation.
2	June 1992	Construct facility.
3	September 1992	Staff and publicize facility.
4	December 1992	Facility becomes operational.

Alternative: Vandenberg AFB Permanent HHW Facility.		
Task	Date	Description
1	Ongoing	Permanent HHW facility on-line.

9.0 SUMMARY OF COSTS AND TIMELINE

The estimated costs have been apportioned to each community based on the development of regional facilities and programs. Actual funding for all facilities and programs will be generated by one of the following existing funding mechanisms: user-based rates, revenue from recovered materials, inter-jurisdictional funding, and state grants. Population figures used are the 1995 figures from the *Santa Barbara County-Cities Area Planning Council Forecast 89*. Vandenberg AFB will continue to operate its permanent fixed HHW facility which assumes ongoing staff and materials disposal costs.

APPROPRIATED COSTS FOR THE CITY OF CARPINTERIA Population: 13,500; 3.6% of County; 7.1% of South Coast		
Selected Alternative	Start Date	Estimated Cost
a. Education ³	June 1992	\$ 2,660
b. Establish waste oil collection facility		
Set Up Costs	September 1992	10,000
Operation	December 1992	2,000 - 5,000
c. Collection Days ⁴		15,272
d. Establish Permanent HHW Facility ⁵		
Construction	June 1992	8,350
Staffing (annual)	September 1992	6,284
Disposal (annual) ⁶		10,650 - 14,200

APPROPRIATED COSTS FOR THE CITY OF SANTA BARBARA Population: 83,400; 22.6% of County; 43.7% of South Coast		
Selected Alternative	Start Date	Estimated Cost
a. Education ⁷	June 1992	\$16,700
b. Establish waste oil collection facility		
Set Up Costs	June 1991	10,000
Operation	September 1991	2,000 - 5,000
c. Collection Days ⁸		15,272
d. Establish Permanent HHW Facility		
Construction	June 1992	51,391
Staffing (annual)	September 1992	38,674
Disposal (annual) ⁹		43,700 - 76,475

APPROPRIATED COSTS FOR THE UNINCORPORATED SOUTH COAST Population: 94,000; 24.8% of County; 49.2% of South Coast		
Selected Alternative	Start Date	Estimated Cost
a. Education ¹⁰	June 1992	\$18,325
b. Collection Days ¹¹		15,272
c. Establish Permanent HHW Facility ¹²		
Construction	June 1992	51,391
Staffing (annual)	September 1992	38,674
Disposal (annual) ¹³		43,700 - 76,475
d. Curbside Oil	No additional costs to add to curbside.	

APPROPRIATED COSTS FOR THE CITY OF SOLVANG Population: 4,900; 1.3% of County; 23.1% of Santa Ynez Valley		
Selected Alternative	Start Date	Estimated Cost
a. Education ¹⁴	June 1992	\$960
b. Establish Recyclable HHW Facility ¹⁵		
Construction	September 1992	2,310
Staffing	December 1992	4,950
Disposal (annual) ¹⁶		2,772
c. Collection Days ¹⁷		12,012

APPROPRIATED COSTS FOR THE UNINCORPORATED SANTA YNEZ VALLEY Population: 16,300, 4.3% of County; 76.9% of Santa Ynez Valley		
Selected Alternative	Start Date	Estimated Cost
a. Education ¹⁸	June 1992	\$3,180
b. Establish Recyclable HHW Facility		
Construction	September 1992	7,690
Staffing	December 1992	16,610
Disposal (annual) ¹⁹		9,228
c. Collection Days ²⁰		39,988

APPROPRIATED COSTS FOR THE CITY OF LOMPOC Population: 37,300; 9.8% of County; 64.5% of Lompoc Wasteshed		
Selected Alternative	Start Date	Estimated Cost
a. Education ²¹	June 1992	\$ 7,240
b. Load Checking	See Permanent HHW facility below.	
c. Collection Days ²²		72,163
d. Establish Permanent HHW Facility		
Permits/Env. Review	December 1991	80,000
Construction	June 1992	75,852
Staffing (annual)	September 1992	57,082
Disposal (annual) ²³		6,514 - 65,145

APPROPRIATED COSTS FOR THE UNINCORPORATED LOMPOC VALLEY Population: 20,400; 5.4% of County; 34.5% of Lompoc Wasteshed		
Selected Alternative	Start Date	Estimated Cost
a. Education ²⁴	June 1992	\$ 3,990
b. Load Checking	See Permanent HHW facility below.	
c. Collection Days ²⁵		39,718
d. Establish Permanent HHW Facility		
Permits/Env. Review	December 1991	80,000
Construction	June 1992	41,748
Staffing (annual)	September 1992	31,418
Disposal (annual) ²⁶		3,586 - 35,860
e. Curbside Oil	No additional costs to add to curbside.	

APPROPRIATED COSTS FOR THE CITY OF SANTA MARIA Population: 62,900; 16.6% of County; 58.7% of Santa Maria Valley		
Selected Alternative	Start Date	Estimated Cost
a. Education ²⁷	June 1992	\$12,270
b. Load Checking	See Permanent HHW facility below.	
c. Establish Permanent HHW Facility ²⁸		
Construction	June 1992	102,865
Staffing (annual)	September 1992	52,424
Disposal (annual) ²⁹		17,610 - 58,700
e. Curbside Oil	No additional costs to add to curbside.	

APPROPRIATED COSTS FOR THE CITY OF GUADALUPE Population: 6,900; 1.8% of County; 6.6% of Santa Maria Valley		
Selected Alternative	Start Date	Estimated Cost
a. Education ³⁰	June 1992	\$ 1,330
b. Establish waste oil collection facility		
Set Up Costs	September 1992	5,000 - 10,000
Operation	December 1992	2,000 - 5,000
c. Establish Permanent HHW Facility		
Construction	June 1992	11,565
Staffing (annual)	September 1992	5,894
Disposal (annual) ³¹		1,980 - 6,600

APPROPRIATED COSTS FOR THE UNINCORPORATED SANTA MARIA VALLEY Population: 36,908; 9.8% County; 34.7% Santa Maria Valley		
Selected Alternative	Start Date	Estimated Cost
a. Education ³²	June 1992	\$7,240
b. Establish Permanent HHW Facility		
Construction	June 1992	60,808
Staffing (annual)	September 1992	30,990
Disposal (annual) ³³		10,410 - 34,700
e. Curbside Oil	No additional costs to add to curbside.	

10.0 EDUCATION AND PUBLIC INFORMATION

10.0.1 Summary

This section includes a description of objectives, existing conditions, and program implementation for the County of Santa Barbara Household Hazardous Waste Education and Public Information campaign. Monitoring and evaluation methods for HHW education and public information are included in section 12.0 of this HHWE.

10.0.2 Introduction

The County of Santa Barbara has used education and public information to promote the existing HHW collection program since the inception in 1984. The annual increase in HHW collection day participation is due largely to the continual integration of the public education programs as described in the existing conditions (Section 3.4, Public Education). Future plans call for continuation and development of current promotion and public information efforts as well as the creation of new, more far-reaching efforts that will include reaching the hispanic population of the County and the promotion of new programs such as the permanent HHW collection facilities and household hazardous materials recycling programs as they become available within the County.

10.1 Objectives

With potential sources of HHW coming from every resident within the County, the education and public information program must

target the entire population. The following areas will be targeted for maximum population reach:

1. general public,
2. schools,
3. businesses and institutions, and
4. consumers.

The short-term (1991-1995) objectives are:

1. to increase the awareness of the potential health, safety and environmental problems that result from improper disposal practices of HHW by County residents, which will result in an increased number of people using proper HHW disposal and recycling options;
2. to increase the awareness and participation in source reduction and use of more non-toxic alternative products among County residents, which will result in less HHW being generated in the County;

The medium-term (1996-2000) objectives are:

1. to decrease the amount of HHW from being improperly disposed of at solid waste landfills and transfer station facilities;
2. to decrease the number of incidences of HHW being poured down sewers, storm drains, waterways or other inappropriate locations.

10.2 Existing Conditions

10.2.1 General Public Information

The County of Santa Barbara's HHW education and public information program began in 1984 with the sponsorship of the County's first periodic HHW collection day event. Education and public information is used to help promote the County's and cities' ongoing events. The program is currently directed by Community Environmental Council (CEC) staff with funding from the County of Santa Barbara Solid Waste Enterprise Fund.

As detailed in section 3.4 of this HHWE, promotional vehicles for the existing HHW collection program include:

- * purchase of newspaper ads;
- * radio ads and PSA's;

- * press conferences and press releases;
- * flyers in English and Spanish;
- * posters and banners;
- * inserts in utility bills.

Information on identification of HHW in the home, proper HHW disposal and recycling options available in the County, potential health, safety and environmental damage caused by improper HHW disposal, and suggested non-toxic alternatives is made available free of charge to the general public. These educational vehicles are discussed in detail in section 3.4 of this element. They include:

- * brochure and reference chart;
- * HHW information hotline;
- * presentations and lectures to schools, businesses and community groups;
- * library and environmental fair displays.

The educational information is available to all residents throughout the County, although distribution of these materials is emphasized in each area prior to the regional periodic HHW collection event. This adds a greater impact to the promotion of the event and encourages residents to participate in their area HHW collection day.

10.3 Selection of Education and Public Information Programs

The expansion planned for the existing HHW public education program, including audiences to be targeted, is described in this section. The existing public education features, such as the HHW hotline and other promotional vehicles mentioned in section 3.4 of this HHWE, will remain and be included as part of the overall HHW education and public information program.

10.3.1 General Public Information

In order to achieve the objectives of this HHW education and public information component, the existing public education program will be expanded through the development of a general media campaign. A HHW program logo and theme will be developed, creating consistency between the existing education and public information program elements, any new program elements and the overall media campaign.

The theme of the HHW education and public information program will be two-fold in order to achieve the County's stated

objectives. The theme will balance identification of household toxics and proper disposal options with the HHW source reduction methods including buying only what you need, using up chemical products rather than throwing them out, and purchasing non-toxic or biodegradable alternatives. Finding a simple, easy identifiable theme that conveys both of these messages will be the first goal of the HHW public education campaign.

In addition to the use of radio and print advertising, the expanded HHW public education program will include television advertising as part of the multi-media campaign. Television will not only enhance the radio and print advertising, but also reach new audiences who might have previously missed other advertising vehicles. Television has the ability to "blanket" the County, helping to achieve a saturation of public awareness.

Additional expansion of the HHW education and public information program includes reaching a greater number the County's Hispanic population. All existing promotional and educational materials will be translated into Spanish within the short-term time period and all new materials will be bilingual. Additionally, the local Spanish radio stations and newspapers will be utilized as part of the multi-media campaign.

10.3.2 School Education and Outreach

The HHW program currently provides an outreach program to schools, clubs and service organizations throughout the County. As described in section 3.4, multi-media slide shows, videos, lectures and demonstrations are offered to these groups upon request.

In order to increase the number of presentations given each year to area schools, steps will be taken to improve the existing educational material to appeal to various grade levels. As part of the County's extensive school outreach program as described in the County SRRE Education and Public Information Component, educators will be given information on how to request a HHW presentation or lecture for their school.

10.3.3 Business and Institutional Outreach

Commercial hazardous waste is not addressed in this HHWE, although outreach programs to businesses and institutions is a very effective method in reaching the general public. In addition to reaching the work force, many businesses are willing to help disseminate HHW information to their customers. The HHW public information program will continue to offer presentations

and distribute flyers, posters and other printed material to the area businesses and institutions.

10.3.4 Consumer Education

The consumer education campaign will increase the development of responsible buying habits when choosing chemical products for the home. As part of the HHW education and public information campaign theme, HHW source reduction methods, including buying only what you need, using up chemical products rather than throwing them out, and purchasing non-toxic or biodegradable alternatives, will be stressed. In-store promotions will be used to help promote HHW disposal and recycling options. Sponsorship of radio programs will be sought for ongoing promotion of source reduction and "smart" product purchases.

10.4 Education and Public Information Implementation

In order to develop a consistent, cost effective HHW education and public information program, the County of Santa Barbara will assume the responsibility of developing a program campaign to be used countywide. A consolidated campaign will use the existing media system more effectively including three television stations and a major newspaper countywide. It would also reduce the amount of overlapping or confusing information that would occur if each city or individual watershed developed their own public education campaign. The program will be implemented through the County of Santa Barbara Education and Public Information campaign using subcontractors to assist in technical assistance, development of the campaign logo and theme, and production of television, print and radio media when necessary. Each participating city will then be responsible for distribution of informational brochures, flyers and other printed materials developed as part of the campaign.

10.4.1 Tasks

Short-term tasks will include:

- * development of a HHW program logo and theme;
- * updating existing program materials to include a logo and theme;
- * translate all existing program materials to Spanish;
- * development of a media plan for television, print and radio media;

- * development of a 30-second television commercial through COX Cable to be placed for airing in paid spots as well as PSA's on stations serving the County;
- * development of a radio campaign in support of the general concept as set forth in the television spot;
- * development of a newspaper campaign in support of the general concept;
- * organization of press conferences and dissemination of press releases when new HHW disposal options are added; and
- * using bilingual advertising whenever possible.

Medium-term task will include:

- * expansion of the original concept or development of a new media campaign;
- * ongoing placement of newspaper, television and radio ads and PSA's; and
- * organization of press conferences and dissemination of press releases as needed.

10.4.2 Schedule for Tasks

HHW EDUCATION AND PUBLIC INFORMATION CAMPAIGN		
Task	Date	Description
1	June 1992	Develop logo and theme.
2	June 1992	Update existing materials to include logo.
3	June 1992	Translate existing materials to Spanish.
4	December 1992	Develop media plan for television, print and radio.
5	March 1993	Develop 30-second television commercial.
6	March 1993	Develop radio campaign.
7	March 1993	Develop newspaper ad campaign.
8	Ongoing	Organize press conferences and press releases to promote new HHW management options.
9	June 1995	Determine effectiveness of original campaign and decide whether to expand on it or develop a new approach.
10	(June 1996)	(Begin implementing new approach.)
11	Ongoing	Placement of ads and PSA's.
12	Ongoing	Organize press conferences and press releases.

10.4.3 Costs

Costs for implementing the program are defined in Table 8.1 of this HHWE. Development of theme and logo, production of television, radio and print advertising, printing and mailing costs and one year of television and radio "buys" will be approximately \$73,890. The responsibility for funding this effort will be shared by all four wastesheds with revenues generated by one of the following existing funding mechanisms: user-based rates, revenue from recovered materials, inter-jurisdictional funding, and state grants. from the solid waste tip fees.

inter-jurisdictional funding, and state grants. from the solid waste tip fees.

10.5 Monitoring and Evaluation

The success of the HHW education and public information program will be gauged by the overall success of the County's HHW management programs. Monitoring and evaluation of the HHW public education program has been incorporated into the HHWE monitoring and evaluation (section 12.0).

11.0 FUNDING

11.0.1 Summary

This component provides cost estimates for implementation of planned programs during the short-term planning period (1991 to 1995); identifies sufficient funding and allocation of resources for program planning, development, and implementation; and identifies sources of contingency funding for household hazardous waste program implementation.

11.1 Implementation Costs

Planning and development, capital, and annual operations and maintenance costs for the selected HHW programs are summarized in this section. Costs for each HHW alternative selected are broken down by watershed since funding for all hazardous waste programs (except at Vandenberg AFB) will be generated through the existing funding mechanisms.

The watershed areas are **Tajiguas Landfill**, operated by the County of Santa Barbara for the Cities of Santa Barbara and Carpinteria and the unincorporated South County; **Foxen Canyon Landfill**, operated by the County of Santa Barbara for the City of Solvang and the unincorporated Santa Ynez Valley; **Lompoc Landfill**, operated by the City of Lompoc for the City of Lompoc and the unincorporated Lompoc Valley; **Santa Maria Landfill**, operated by the City of Santa Maria for the Cities of Santa Maria and Guadalupe and the unincorporated Santa Maria Valley; and **Vandenberg AFB Landfill**, operated by VAFB for base residents.

11.1.1 Planning and Development

The HHW management programs identified in this HHWE have been in development since 1988 with the completion of the County's Waste Management Plan. With most of the HHW programs being implemented by 1992 and with significant planning already completed, the

planning and development costs will not impact jurisdictions beyond 1993. Note that Vandenberg AFB is not represented in this section because the base HHW programs are currently operational.

With each jurisdiction adding staff to assist with planning and development of the SRRE programs, it is assumed that a small percentage of that staff time will be used for planning and development of the remaining HHW programs to be implemented. Additionally, technical assistance will be required for some programs.

Table 11.1(a): Planning and development costs for Tajiguas and Foxen Canyon Landfills' wastesheds.

Staff Time	Year*		
	1991	1992	1993
Staff time (25%)	\$20,000	\$21,000	\$22,050
Technical Assistance	25,000	26,250	27,565
Total Planning and Development	\$45,000	\$47,250	\$49,615
* assumes a 5% annual increase			

Table 11.1(b): Planning and development costs for the Lompoc Landfill wasteshed.

Staff Time	Year*		
	1991	1992	1993
Staff time	\$ 5,000	\$ 5,250	\$ 5,512
Technical Assistance	--	15,000	--
Total Planning and Development	\$ 5,000	\$20,250	\$ 5,512
* assumes a 5% annual increase			

Table 11.1(c): Planning and development costs for the Santa Maria Landfill wasteshed.

Staff Time	Year*		
	1991	1992	1993
Staff time	\$ 5,000	\$ 5,250	\$ 5,512
Technical Assistance	3,500	32,000	--
Total Planning and Development	\$ 8,500	\$37,250	\$ 5,512
* assumes a 5% annual increase			

11.1.2 Capital Costs and Operations and Maintenance Costs

Capital costs for each HHW program and the year the program will be implemented are included in this section. Additionally, tables indicating annual operations and maintenance costs for the selected HHW programs, broken down by wasteshed area, are also presented. Note that all HHW programs will be implemented in the short-term planning period (1991-1995) and that all costs assume a 5% annual increase.

SOUTH COUNTY: Tajiguas Landfill Capital Costs					
Program	1991	1992	1993	1994	1995
Education	--	\$ 6,757	--	--	--
Periodic Collection Days	--	--	--	--	--
Load Checking	--	83,800	--	--	--
Oil Recycling:					
Carpinteria Drop-off	5,000	--	--	--	--
Santa Barbara Drop-off	--	10,000	--	--	--
Curbside	--	--	--	--	--
Permanent HHW Facility	--	117,600	--	--	--
Total Capital Cost	\$5,000	\$218,157	\$ 0	\$ 0	\$ 0
* Tajiguas Landfill and South County Transfer Station					

SOUTH COUNTY: Tajiguas Landfill Operations and Maintenance Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$30,928	\$32,470	\$34,093	\$35,798
Periodic Collection Days ¹	430,202	215,101	--	--	--
Load Checking ²	20,000	21,000	22,050	23,050	--
Oil Recycling:					--
Carpinteria Drop-off	2,000	2,100	2,205	2,315	
Santa Barbara Drop-off	--	2,100	2,205	2,315	--
Curbside	2,000	2,100	2,205	2,315	--
Permanent HHW Facility					--
Staff	--	44,250 ⁴	92,925	97,571	--
Disposal ³	--	87,500 ⁴	183,750	192,937	
Total O&M	\$454,202	\$405,079	\$337,810	\$354,596	\$372,429
¹ Two events in 1991 and one event in 1992. ² Tajiguas Landfill and South County Transfer Station (two sites at 25% staff time). ³ Based on six months; facility opens mid-year. ⁴ Average disposal cost (estimated range: \$150,000 - 200,000).					

NORTH COUNTY: Foxen Canyon Landfill Capital Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$ 742	--	--	--
Periodic Collection Days	--	--	--	--	--
RHHM Facility	--	50,000	--	--	--
Oil Recycling:					
Curbside	--	--	--	--	--
Total Capital Cost	\$5,000	\$ 50,742	\$ 0	\$ 0	\$ 0
* Includes Load Checking Storage Area					

Household Hazardous Waste Element

SOUTH COUNTY: Tajiguas Landfill Operations and Maintenance Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$ 3,395	\$ 3,564	\$ 3,742	\$ 3,929
Periodic Collection Days	52,000	54,600	57,330	60,196	63,205
RHHM Facility ¹					
Staff	--	10,780 ³	22,638	23,769	24,957
Disposal ²	--	8,000 ³	16,800	17,640	18,522
Oil Recycling:					
Curbside	2,000	2,100	2,205	2,315	2,430
Total O&M Cost	\$ 54,000	\$ 78,875	\$102,537	\$107,662	\$113,043
¹ Includes Load Checking. ² Based on six months; facility opens mid-year. ³ Average disposal cost (estimated range: \$12,000 - 20,000).					

LOMPOC VALLEY: Lompoc Landfill Capital Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$2,014	--	--	--
Periodic Collection Days	--	--	--	--	--
Permanent HHW Facility	--	117,600	--	--	--
Oil Recycling:					
Lompoc Drop-off	\$5,000	--	--	--	--
Total Capital Cost	\$5,000	\$119,614	\$ 0	\$ 0	\$ 0
* Includes Load Checking Storage Area					

LOMPOC VALLEY: Lompoc Landfill Operations and Maintenance Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$ 9,217	\$ 9,678	\$10,161	\$10,669
Periodic Collection Days ¹	111,881	--	--	--	--
Permanent HHW Facility ²					
Staff	--	44,250 ³	92,925	97,571	102,449
Disposal ⁴	--	27,500 ³	57,750	60,637	63,668
Oil Recycling:					
Lompoc Drop-off	2,000	2,100	2,315	2,315	2,430
Total O&M Cost	\$113,881	\$ 83,067	\$162,558	\$170,684	\$179,216
¹ One event in 1992. ² Includes Load Checking Storage Area. ³ Based on six months; facility opens mid-year. ⁴ Average disposal cost (estimated range: \$10,000 - 100,000).					

SANTA MARIA VALLEY: Santa Maria Landfill Capital Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$3,737	--	--	--
Permanent HHW Facility*	--	175,240	--	--	--
Oil Recycling:					
Santa Maria Drop-off	--	--	--	--	--
Curbside	--	--	--	--	--
Total Capital Cost	\$ 0	\$178,977	\$ 0	\$ 0	\$ 0
* Includes Load Checking Storage Area					

SANTA MARIA VALLEY: Santa Maria Landfill Operations and Maintenance Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$17,100	\$17,955	\$18,852	\$19,794
Permanent HHW Facility ¹					
Staff	--	44,655 ²	93,775	98,463	103,386
Disposal ³	--	32,500 ²	68,250	71,662	75,245
Oil Recycling:					
Santa Maria Drop-off	2,000	2,100	2,315	2,315	2,430
Total O&M Cost	\$ 2,000	\$ 96,355	\$182,185	\$191,292	\$200,855
¹ Includes Load Checking Storage Area. ² Based on six months; facility opens mid-year. ³ Average disposal cost (estimated range: \$30,000 - 100,000).					

Vandenberg AFB Landfill Capital Costs.					
Program	1991	1992	1993	1994	1995
Education	--	\$ 500	--	--	--
Permanent HHW Facility*	--	--	--	--	--
Oil Recycling:					
Drop-off	--	--	--	--	--
Total Capital Cost	\$ 0	\$ 500	\$ 0	\$ 0	\$ 0
* Includes Load Checking Storage Area					

Annual operations and maintenance costs are unavailable for the Vandenberg AFB sanitary landfill.

11.2 Funding Sources

This section identifies revenue sources which are planned to be used to fund program implementation. Household hazardous waste management programs are included as part of the County's and cities' overall integrated waste management system. As demonstrated in the County and cities' SRREs and the Countywide HHWE, a significant capital investment and expenditure of public funds is necessary in order to meet the goals as defined in these documents.

To pay for this investment and ongoing operation and monitoring of the HHW programs, rates for waste management services will

increase. In general the current revenue-neutral, fee-for-service funding system in which users pay for all waste management activities will continue.

Vandenberg AFB does not generate any revenues from traditional revenue sources such as tipping fees, user fees, commercial waste hauler fees, property taxes, or bonds. HHW management programs at Vandenberg AFB are funded by the United States Department of Defense (DOD) budget as appropriated by Congress. The Base Financial Management Board, chaired by the installation commander, has the authority to allocate and authorize use of funds from a fixed budget for specific purposes.

11.2.1 User Based Rates

The following types of rate structures could potentially generate funding:

- a. fees associated with the collection of waste generated residential units;
- b. fees associated with the collection of commercially generated waste; and
- c. tipping fees collected at solid waste facilities such as landfills, transfer stations and integrated diversion facilities.

11.2.2 Revenue from Recovered Material

Currently, only limited markets exist for household hazardous waste. Recovered household hazardous recyclable materials such as motor oil, latex paint, batteries and antifreeze have available markets, although no revenue is realized through these recycling options. As discussed in the HHWE, the cost to collect, separate, sort and transport these materials is far greater than any revenue which may be generated currently or in the near future. Instead, utilizing recycling markets for these materials helps to subsidize the RHHM programs by avoided hazardous waste disposal costs.

11.2.3 Inter-jurisdictional Funding

In some cases, funding requirements may be met by joint financing with other local jurisdictions. Fees should be established to assure that each jurisdiction pays its "fair share" of capital and operating costs in proportion to the benefits received. One example of this would be a joint waste oil collection facility

located to serve the City of Carpinteria with funding provided by the City and County.

11.2.4 State Grants

The California Integrated Waste Management Board offers \$4 million annually for non-discretionary grants for the Household Hazardous Waste Grant Program (AB 2448). To qualify for funding, a jurisdiction must have implemented a HHW program during the fiscal year prior to application and generated fees into the Solid Waste Disposal Site Cleanup and Maintenance Account. To date, the County of Santa Barbara, the City of Lompoc and the City of Santa Maria have been awarded AB 2448 grants.

11.3 Other Revenue Sources and Contingency Funding

This section identifies additional potential revenue sources and contingency funding mechanisms that jurisdictions could use to fund HHW management programs.

11.3.1 Private Grants

Although discretionary, grants from private foundations and industry may be utilized for Countywide HHW programs. To date, Exxon has granted the County of Santa Barbara \$10,000 for waste oil collection. This will be used to fund an oil recycling site at one of the South Coast buyback recycling centers. Other private foundation grants are being explored for HHW educational materials.

12.0 MONITORING AND EVALUATION OF HHWE PROGRAMS

This section provides program monitoring and evaluation mechanisms for the recommended HHWE programs. This section: proposes methods for monitoring achievement of the element goals and objectives; identifies agencies responsible for monitoring and evaluation; identifies criteria for evaluating program effectiveness; discusses monitoring and evaluation funding; and identifies measures to be taken if monitoring shows a shortfall in the attainment of the component objectives.

Note: Article 6.3, Section 18751.6 (a) (4) of the AB 939 Regulations requires the jurisdictions affected by this HHWE to obtain prior written approval of this monitoring and evaluation methodology.

12.1 Monitoring Method and Responsible Agencies

Monitoring and evaluation of HHWE programs will be carried out through annual reporting. The agencies responsible for HHWE programs will take the lead on the annual reports in a cooperative effort with all of the participating jurisdictions. Three annual Household Hazardous Waste Element Monitoring and Evaluation Reports will be compiled by the Public Works Departments of the County of Santa Barbara, the City of Lompoc and the City of Santa Maria. The City of Guadalupe will be included in the City of Santa Maria's annual report. The Cities of Carpinteria, Santa Barbara and Solvang will be included in the County's annual report.

The HHWE Monitoring and Evaluation Reports will contain the following:

1. A brief summary of the HHW programs being implemented in the area affected by the report and the schedules for any programs in planning and/or development.
2. A brief discussion of progress towards the goals and objectives established for the HHWE.
3. A short evaluation of the HHW programs in terms of the evaluative criteria listed in this section (see below).
4. If a shortfall in the attainment of HHWE goals and objectives is identified, a special section of the report will be compiled which summarizes the shortfall(s) in terms of the list contained at the end of this section.
5. A brief discussion of the HHW education and public information program's impact on the HHW collection programs countywide.

The completed reports will be submitted to the Local Task Force, the County HHW Advisory Committee, and the CIWMB.

12.2 Criteria for Evaluating HHWE Program Effectiveness

The AB 939 regulations require this plan to include specific criteria for evaluating the HHW programs effectiveness. The following list of criteria will be used for evaluating the HHW program in the annual reports:

1. participation rates by geographic area;

2. quantities of HHW by type collected;
3. quantities of HHW by type recycled; and
4. the cost of the HHW program implementation.

In addition, the following criteria will also be used for evaluating the HHW education and public information program effectiveness on the overall HHW program in the annual reports:

1. quantities of HHW by type diverted through load checking programs;
2. frequency of HHW presentations to schools and community groups; and
3. the cost of the HHW education and public information campaign implementation.

12.3 Monitoring and Evaluation Funding Requirements and Revenue Sources

HHWE program monitoring and evaluation reports will be prepared by the Public Works Department staff of the HHWE lead agencies (County of Santa Barbara, the City of Lompoc, and the City of Santa Maria). These annual reports will not be exhaustive and will contain information which is already routinely gathered for these programs. For these reasons, it is estimated that the reports will require approximately 50 to 100 hours of staff time per report (or approximately \$2,500 to \$5,000 per report).

The costs of monitoring and evaluation will be funded by fees specifically collected for solid waste management activities. Revenue sources and funding are discussed in detail in the Funding Component.

12.4 Measures to be Taken if Monitoring Shows a Shortfall

If the monitoring and evaluation report shows a shortfall in the attainment of the HHWE goals and objectives, the agency compiling the annual report will include a special section identifying the following:

- * areas in which the HHW program is deficient;
- * potential measures to increase participation in HHW programs; and

- * potential measures to increase HHW program efficiency.

The section will be included with the annual report submitted to the Local Task Force, the County HHW Advisory Committee and the CIWMB.

ENDNOTES

- 1 Health and Safety Code, Section 25201(c) as amended.
- 2 Title 22, California Code of Regulations.
- 3 Percentage of countywide program (based on population).
- 4 Offered until permanent facility on-line. Proportionate share of one South Coast event.
- 5 Using South Coast facility operated by County. Based on percentage of South Coast population.
- 6 Depends on volume of waste collected.
- 7 Percentage of countywide program (based on population).
- 8 Offered until permanent facility on-line. Proportionate share of one South Coast event.
- 9 Depends on volume of waste collected.
- 10 Percentage of countywide program (based on population).
- 11 Offered until permanent facility on-line. Proportionate share of one South Coast event.
- 12 Using South Coast facility operated by County. Based on percentage of South Coast population.
- 13 Based on volume of material collected.
- 14 Percentage of countywide program (based on population).
- 15 Assist county with set up/operation of its facility at Foxen Canyon Landfill.
- 16 Based on volume of material collected.
- 17 Proportionate share of one event in Santa Ynez Valley.
- 18 Percentage of countywide program (based on population).
- 19 Based on volume of material collected.
- 20 Proportionate share of one event in Santa Ynez Valley.
- 21 Percentage of countywide program (based on population).
- 22 Continued until permanent facility is on line. Proportional share of one event in Lompoc Valley.
- 23 Depends on volume of material collected.
- 24 Percentage of countywide program (based on population).
- 25 Continued until permanent facility is on line. Proportional share of one event in Lompoc Valley.
- 26 Depends on volume of material collected.
- 27 Percentage of countywide program (based on population).
- 28 Included as part of the city's load checking program.
- 29 Based on volume of material collected.
- 30 Percentage of countywide program (based on population).
- 31 Based on volume of material collected.
- 32 Percentage of countywide program (based on population).
- 33 Based on volume of material collected.

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